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THE CARE OF THE PATIENT*

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IT IS indeed an honor to be invited by the Faculty of the Harvard Medical School to address the student body on some phase of the care of the patient — a very great honor, in fact, when one considers that this has been an annual event for the past twelve years and that some very outstanding men in medicine have been invited to deliver this lecture. It is also a satisfaction to be able to discuss the care of the patient rather than his treatment, for it implies that one is interested in the patient's welfare as well as in his disease.

I wish to congratulate you on the wisdom you have displayed in choosing the Harvard Medical School in which to study, for this school holds a very enviable position among the fine schools of this country; in fact, Embree, in his review in 1935 for the Rosenthal Fund of America's greatest universities, placed Harvard first among the five foremost universities. And to be in Old Boston, which offers so much that is cultural and inspiring, with its fine medical tradition built over the years by outstanding clinicians and surgeons who have worked and taught in this time-honored institution, is an advantage.

In spite of the great advances in medicine in the last twenty years and the contributions which our profession has made in disease prevention, disease control and the prolongation of life, it is distressing to be told — and I have been informed on good authority — that about 13 per cent of the population, or nearly 15,000,000 persons, have been weaned away from the medical profession. Among them, unfortunately, are the educated who have become faddists, those who have embraced Christian Science or faith healing and those who belong to the antivivisectionists and antivaccinationists. This last group, however, are often on the fence in their sympathies with our efforts as a profession. Then comes a group of less intelligent people who employ the cults — the osteopaths, chiropractors and naturopaths; and below this group in the matter of intelligence are the patent-medicine addicts, the victims of the quacks and a group of non-thinking persons who are just against doctors anyway. It will be difficult to reduce materially the numbers of the above-mentioned groups, but I firmly believe that by better treatment or better care or by education this, in some measure, can be accomplished.

There is another group, however, who are not sympathetic with our work or our efforts because of disappointment suffered at our hands, those who cannot understand that certain diseases cannot be cured, those who have been disappointed over the outcome of certain forms of treatment or operations, those who have been hurt and wounded by too much science and too little art, as modern medicine, unfortunately, is sometimes practiced today. This includes also a large number of people who break down today in merely trying to exist in our complex modern world, and who are considered too often in a scientific light when what they need most of all is understanding and help with distressing problems in life which are often the true underlying cause of their ill health. This is an ever-enlarging group of people, and it is most important that the modern physician become skilled in their management.

It is about this last-mentioned group that I wish to speak, for I believe that if our technic in approaching and treating these people could be improved, we could salvage great numbers of them and retain their sympathetic understanding of our efforts in their behalf, instead of having them give themselves into the hands of the cultists and other charlatans.

It would be wrong, of course, to advocate less science in the teaching of modern medicine; it would be iconoclastic to advise that less interest be placed on problems of research or that there be less emphasis on the teaching of the specialties, for we know too little about so much, and there are still great discoveries and advances which

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must be made, and which will continue to be made yearly. But I wonder oftentimes whether the student's training in the art of medicine is not being minimized, or at times neglected, because the science of medicine has become so intriguing and so fascinating — and the time is so short in which to review it all.

Here at Harvard you are fortunate in having professors who fully appreciate this situation, for here the true art of medicine is practiced and preached, and they feel so keenly about its importance that they have instituted these yearly lectures on the care of the patient.

I should like to review with you some of the influences which might be termed controllable and which keep large groups of people out of sympathy with our efforts for their welfare. In modern hospital and clinic work it is becoming increasingly more difficult to practice the art of medicine. The busy routine of an institution does not lend itself readily to a painstaking and broad consideration of the patient as an individual as well as of his disease. It is time-consuming to listen to a long story about home situations which at the time seem irrelevant, but often it is during the recitation of such homely things that the true cause of the illness under discussion is discovered.

It is in the busy life of a large institution that the young doctor may unconsciously acquire habits which will militate against his future success. The hurried, businesslike, serious approach to the patient — the thorough, systematic, orderly, quick but frigid first examination of some frightened, diffident patient — may give that patient an unfortunate impression of the institution and of its doctors. I was once an assistant of a famous surgeon who said he never wanted, as an assistant, a man trained in a near-by large city hospital, for while these men had had excellent training, there was a brusqueness, a roughness and a callousness about them that was very unfortunate. As he expressed it, the first encounter between the patient and the young doctor was "down with the bedclothes and up with the nightshirt" and a prompt and a fixed interest on the patient's diseased gall bladder rather than an interest in the patient who was unfortunate enough to have a diseased gall bladder.

I remember attending lectures in a city after I had finished my medical course, and of hearing the clinical professor of medicine, in a loud, booming voice, admonish his students with this caution: "Remember that the first duty of the physician is to search for and find the underlying pathologic process" — which he invariably tried to do with some quivering, terror-stricken patient shown before the class. This man was a great teacher, but I was informed that he had an extremely difficult time in making a living. As a true scientist there was no one better, but he represented a type seen often, one who has much learning but very little wisdom.

In regard to the initial approach to our patients: it is well to remember that they are all frightened, all apprehensive and many of them hypersensitive. It behooves every young man to develop a finesse in dealing with these people. It takes a certain personality to succeed in any walk of life. Many have it by natural inheritance, and others may acquire it by studying the ways of successful men and by developing within themselves those characteristics which make life a success; but, unfortunately, a few never can acquire the right type of personality which is so essential to success.

The student, the intern and every young physician should study the ways of his teachers, for invariably the successful teacher is a man of broad understanding and vision, a kindly man who is gentle and considerate with all his patients irrespective of their walks in life. I am grateful to my chiefs for teaching me many things which could not be learned in the operating rooms and in the laboratories, and I value my association with them while on rounds in the wards, in ward classes and in their consultation rooms, for there they dealt with human beings and not with unconscious patients or with laboratory problems.

As I have mentioned, functional disease is widespread and is increasing at a rapid rate. The present economic situation with its insecurity of the future is more than many of the population can withstand. We must remember that nearly all our patients having organic disease are mentally disturbed at the time of the first examination, and because of this it is of very great importance; but it is the patient who is functionally ill and with some organic lesion who demands a nicety of judgment to decide whether it is wise or best to concentrate our efforts alone on the organic lesion, to advise operation for the lesion or to treat the patient in a broad, general way, if there is no danger in delay. Many patients are accepted for operation in good faith and are thought to be well after the wound has healed per primam. They are listed as cured and return home to the troubled environment which may have been largely responsible for the illness. They then present a problem to the family physician and often to a psychiatrist, who may have reason to doubt the efficacy of the cure.

The anxious mother who is harassed by worries about her children or her husband and who has a retroverted uterus should not be accepted for operation without carefully weighing all sides of

the evidence; the young man with a duodenal ulcer whose symptoms are all exaggerated by an increase of emotional strain had better be treated by any method other than operation. On the medical service the head of a family with a heart lesion, whose nights are veritable nightmares because of economic situations and hardships which will arise should his job be lost because of his lesion, needs understanding of his problems as well as digitalis; the mother who is crushed with grief over the death of a child had better not be accepted for operation without a most careful consideration of just how much effect her grief may have on her health. These are just a few of the problems which we see almost daily in our work, but each illustrates the importance of considering the patient as an individual as well as his disease. Ill-advised medical or surgical treatment of these patients is almost sure to be fraught with disappointment to the patient and to the doctor, and is one of the causes of having groups of people lose sympathy with our efforts.

The work of your great Cannon proves the harmful effect of emotions on bodily physiology. Would that its importance were more generally understood by our profession! The disastrous effect of fear is not fully appreciated. Long-continued anxiety, apprehension, doubt and fear will undermine the nervous equilibrium of even normal, healthy people.

The offspring of wild animals at birth are without fear, but that instinct needs only a few days of mother training to be developed to a high degree. Unhappy is the lot of any wild thing which loses its mother during the first few days of life, for without the fear instinct developed, it soon falls an easy prey to its many enemies.

Fear, therefore, as a means of protection has been of untold advantage to all species in their development, especially to man, who survived not only, perhaps, because he was fit, but because he knew when to retire and live to fight another time.

This instinct of self-preservation to flee from danger and to avoid painful contact, coming down to man through the ages, calls forth immense emotional activity. The thought or memory of an escape from an attack may cause the greatest degree of emotional excitement; so also the apprehending of an oncoming encounter with foe—or surgeon—may produce the same state of mind, and even though the individual remains passive during it, his exhaustion will be more complete and more profound than if he had given vent to his emotions in some form of motor activity. It is a well-known fact that fear associated with pain may exhaust the organism to the point of death. Our surgical patients whose minds are racked with these emotions of fear and worry are often exhausted before they are anesthetized, and are fit subjects for surgical shock. In no other disease is the relation between fear and the severity and aggravation of symptoms better shown than in exophthalmic goiter. The reduction in the operative mortality in the treatment of this disease has not been due alone to improvements in technic. It has come about since we have gained a better understanding of the disease and of the harmful effects of fright on these patients. Crile's great work on anoci-association is a monument to his splendid genius!

Cannon has shown that all bodily functions are altered and perverted by the emotions of pain, hunger, fear and rage—fear and rage being the most harmful. The preoperative rise in temperature, the fast pulse, the tremor, the insomnia and at times the glycosuria are the results of terror which grip the mind of the patient about to be operated on; oftentimes the subnormal temperature, the lost appetite, the drawn face and the languor seen in the postoperative patient are caused by grave worry and doubt. It is surprising to see the improvement in these patients as their mental attitudes are changed by suggestion.

Psychoanalysis reveals that much hysteria and psychoneurosis and many neurasthenic states have as their origin some past emotional upset—usually attended by fear or fright. We are all familiar with cases showing hysterical paralysis, aphonia, aphasia or blindness which can be definitely traced back to some terrifying emotion.

Granted, then, that fear is a harmful emotion which may be the foundation of future mental illness that upsets bodily economy, retards convalescence, interrupts recoveries and when severe and associated with pain may cause death, is not an earnest effort on our part to eliminate this emotion from our patient's mind justifiable? What may we do in a practical way to eliminate it? In the first place, the patient should be considered from a psychological standpoint from the time he is admitted until after he leaves the institution. During his entire stay his mental welfare and comfort must receive the same careful consideration as does his physical welfare—for the majority of our patients are mentally as well as physically ill.

The personnel of the hospital should be chosen with great care, and the personality of each worker must suit the position he is to fill. Few of us realize how timid and diffident most of our patients are on admission, or how easily they may be hurt by apparent inattention, or frightened by

their new surroundings. It is so important to have their reception a cordial and a friendly one, for the first impressions they get of the hospital and of us are often lasting ones. And this is as equally true of the general practitioner's work in his office and in the home as it is of the hospital.

Great benefit may be had by the proper treatment of those who are ill from emotional causes. We all know the importance of a careful examination followed by the proper kind of suggestion. Many of these people, while not suspicious, are keen, and they are disarmed and lose confidence promptly if they sense any uncertainty in the mind of the physician as to the exact cause of their illness. For this reason I believe a discussion of the patient's case with associates in the presence of the patient is most unfortunate, especially should there be an uncertainty as to the correct diagnosis. The chiropractor or the quack never shows that he entertains the slightest doubt as to the correctness of his diagnosis, and what benefit his patients show comes entirely from suggestion.

In closing, let me emphasize another very important point in the care of the patient; that is, our patients should not be allowed to suffer unnecessarily during illness, after injury or after surgical operations, nor should they be hurt by painful dressings or manipulations which may be necessary. The apprehensive patient who is allowed to suffer without need cannot be convinced that his condition is satisfactory — it is far from being so to him and he fears an unsatisfactory or fatal outcome. It is important to use light gas anesthesia or short intravenous anesthesia for painful dressings, for *brisement forcé*, for certain cystoscopic examinations or for the removal of gauze drains. We are not handicapped as were the older surgeons, who, because there were no anesthetics except ether and chloroform, were obliged to hurt their patients, at times severely. These men were forced to excuse their acts by the statement, "I am hurting you now to help you later." The modern operator should not hurt his patients or allow them to suffer unnecessarily — the modern surgeon will not.

Broadly reviewing the question of the care of the patient as one who has spent his entire professional life in clinic and hospital practice, I believe that as physicians we cannot rely on our skill alone for our full measure of success, for it is necessary for us to give ourselves freely to our patients at all times. They need to be comforted, assured and bolstered up during illness and for the trying ordeals they may have to undergo. Our optimism must be constant, and we should be trained in practical psychology if our patients' minds are to be freed from the harmful emotions I have described.

Little touches of human kindness, strict and constant attention to the patient's mental welfare, will do much to rob our clinics and our hospitals of their cold, institutional atmosphere, which frightens so many of our diffident patients and interferes with many a satisfactory recovery — and equally important, such a plan will not only keep many of our patients loyal to our profession but will win back to our fold many who have deserted us for the cults.

THE EFFECT OF KITCHEN PROCEDURES ON THE VITAMIN C CONTENT OF FRUIT JUICES*

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IT IS the purpose of this paper to report the different effects of kitchen handling on the vitamin C content of the fruit juices in common use. The possibility of serious loss of vitamin C by naturally occurring oxidative processes during such manipulations was suggested by Daniel, Kennedy and Munsell,[1] who found a loss of about 10 per cent in the vitamin C potency of orange juice which had stood for six hours in a refrigerator. They further warned: "Since juices lose their scurvy-preventing power on standing, the common household routine of preparing juice in the evening for breakfast should not be practiced." This opinion has been circulated rather widely in both professional and lay channels.

We have studied the rapidity of oxidation of the vitamin at room temperature, in the icebox and in the double boiler. We have also mixed vitamin D-containing oils into orange juice to study whether they inactivate the ascorbic acid of the latter. Obviously the important clinical consideration is not so much the vitamin C content of the fresh juice as that of the prepared juice at the moment of consumption.

The quantity of ascorbic acid present in orange juice, tomato juice and pineapple juice, though subject to considerable variation, remains close enough to average figures for the clinician to utilize these substances with satisfactory approximation of prophylactic and curative doses. These doses have been determined with reasonable accuracy. Without entering here into a detailed discussion of the exact daily requirement, one may summarize existing opinion[2–4] by stating that the baby should have about 25 mg. or more, and the adult 50 mg. or more, of ascorbic acid daily. Moreover, it has been determined[5–7] that a baby or adult suffering from scurvy can be saturated by the oral administration of about 200 mg. of ascorbic acid given three times a day for three days, although much smaller quantities suffice to produce clinical improvement. That the baby's requirements are so close to those of the adult is doubtless due to the disproportionately large fraction utilized for growth processes.

For clinical purposes fresh orange juice, according to Bessey,[8] may be considered to contain 50 mg. of ascorbic acid per 100 cc., provided the fruit has not been stored more than half a year. Bessey found no detectable loss of vitamin C in oranges stored for two months at 45 to 50°F., although losses of 10 to 35 per cent occurred after ten months. Likewise, canned tomato juice may be relied on to average 15 mg. of ascorbic acid per 100 cc. McElroy and Munsell[9] tested eleven brands and found them to vary between 8 and 26 mg. per 100 cc., with an average of 17 mg. The average figure given for canned pineapple juice is 10 mg. per 100 cc.[8] Our own experience is in accord with these figures, as shown in Table 1.

However, the vitamin C content of a food at the time of consumption may be diminished from earlier values owing to naturally occurring oxidative processes. The time interval elapsing before consumption is thus of considerable importance. It has been also shown that ascorbic acid is very readily oxidized in alkaline solutions and is relatively stable in acids.[10] Heating increases the rate of oxidation, as does the presence of copper, which acts as a catalyst even in infinitesimal amounts.

TABLE 1. *Ascorbic Acid Content of Canned Juices.*

Tomato Juice		Pineapple Juice	
BRAND NO.	ASCORBIC ACID CONTENT	BRAND NO.	ASCORBIC ACID CONTENT
	mg. per 100 cc.		*mg. per 100 cc.*
1	16.7	1	10.6
2	12.7	2	9.6
3	18.6	3	9.4
4	17.7	4	6.4
5	21.5	5	9.0
6	21.4		
7	15.0		
8	18.0		
9	15.8		
10	15.4		
11	15.6		
12	15.6		
Averages	17.0		9.0

Aside from the initial vitamin content of a food, therefore, it becomes of importance to study the other conditions which may influence its final content. For instance, both cow's milk and woman's milk, which have a very considerable content of vitamin C when fresh, lose most of it following pasteurization and the delay consequent to marketing.[11, 12] Obviously this is the reason why

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an antiscorbutic supplement has to be added to the infant's diet.

When we come to examine the antiscorbutic juices in common use their protective acidity is noteworthy. The main variables are heat and time. It is not an uncommon routine for a housewife to squeeze the oranges the night before consumption, and it is her regular practice to open cans of tomato or pineapple juice for immediate consumption of part of the juice while the remainder is placed in the refrigerator for a few days. It is also not uncommon to find that the mother has been boiling the baby's orange juice as well as his formula, and the possible deleterious effect of this becomes of clinical importance.

The effects of heating and standing on the ascorbic acid content of orange, tomato and pineapple juices were investigated as follows: Fresh orange juice was squeezed into a tumbler, thoroughly mixed, filtered and divided into three parts. One part was stored in a refrigerator, the second was left at room temperature and the third was kept in boiling water in a test tube tightly corked except for a small lumen. Loss of water by evaporation was practically negligible. Representative brands of pineapple juice and tomato juice were filtered and similarly divided. At suitable intervals aliquots were removed for titration with 2-6-dichlorindophenol. The results are shown in Table 2.

TABLE 2. *Effects of Time and Temperature on the Ascorbic Acid Content of Juices.*

In Double Boiler (95°C.)		At Room Temperature (27°C.)		In Refrigerator (5°C.)	
Minutes	Ascorbic Acid Content	Hours	Ascorbic Acid Content	Hours	Ascorbic Acid Content
	%		%		%
Orange Juice (50.5 mg. per 100 cc.)					
0	100.0	0	100.0	0	100.0
20	91.0	3	96.0	4	100.0
50	88.1	5	92.1	24	93.0
70	88.1	21	90.1	70	72.1
95	87.1	28.5	86.1	94	53.4
115	85.1				
135	83.2				
Tomato Juice (12.1 mg. per 100 cc.)					
0	100.0	0	100.0	0	100.0
20	78.0	4	84.3	4	95.6
70	66.6	20	72.0	24	85.1
90	60.0	28	66.7	48	81.1
155	43.8			72	66.9
Pineapple Juice (7.2 mg. per 100 cc.)					
0	100.0	0	100.0	0	100.0
20	92.3	4	92.3	4	96.0
70	84.6	20	84.6	24	86.0
90	76.9	28	69.2	48	61.1
165	69.2			72	42.0

It is apparent, from a practical point of view, that little loss occurs when the juice is stored for a day in the icebox, or left in the kitchen for reasonable lengths of time at room temperature. Although boiling very perceptibly increases the rate of oxidation, the fact that a housewife has brought the orange juice to a boil or even boiled it for three minutes is not sufficient grounds for regarding the juice to be worthless as an antiscorbutic. It still retains well over 80 per cent of its ascorbic acid after an hour at 95°C.

The effect of adding cod-liver oil or a concentrated antirachitic oil to an aliquot of 50 per cent orange juice is shown in Table 3. It is seen that no demonstrable catalytic effect is exerted on the oxidation of the vitamin.

TABLE 3. *Effect of Adding Vitamin D Containing Oils on Stability of Ascorbic Acid in Orange Juice.*

No. of Hours	Temperature	Ascorbic Acid Content: Orange Juice Control*	Orange Juice Plus Oleum Percomorphi†	Orange Juice Plus Cod-Liver Oil‡
		%	%	%
0		100.0	100.0	100.0
2	27°C.	87.5	82.4	89.4
6	27°C.	81.2	80.4	81.0
24	27°C.	75.1	69.3	70.4
6	5°C.	96.0	97.7	98.5
24	5°C.	92.4	93.1	89.4
48	5°C.	84.2	86.3	71.7

*Orange juice diluted with 50 per cent water (32.9 mg. ascorbic acid per 100 cc.).
†100 cc. diluted orange juice plus 8 drops Oleum Percomorph.
‡100 cc. diluted orange juice plus 8 cc. cod-liver oil.

COMMENT

Since the isolation and synthesis of ascorbic acid it has been shown that it is very readily oxidized in alkaline solutions and is relatively stable in acids. Heating tends to increase the rate of oxidation, as does copper acting as a catalyst. When oxidation proceeds at a slow rate, the time factor becomes of added importance.

Thus, although fresh cow's milk has a very appreciable ascorbic acid content, too much of the vitamin is oxidized during milking, pasteurization and marketing to make that food a reliable antiscorbutic agent. The breast-fed infant is amply protected since he contends neither with catalysts nor with time. It is apparent that it is not only the high vitamin content of citrus fruits but the protective acidity of the juice which makes them so efficacious as antiscorbutic foods, and it is no accident that these substances have become a routine part of the diet of the artificially fed infant.

Oxidation of ascorbic acid in orange, tomato and pineapple juices proceeds so slowly at icebox temperatures that the greater part of their vitamin C potency is retained after one or two days' refrigeration. The longer they stand, however, the greater is the destruction of the vitamin. Although the

rate of oxidation is materially increased at room temperatures, and greatly increased by boiling, it is not enough to necessitate particular caution in the ordinary kitchen handling and preparation of these juices.

It seems justifiable for the clinician to assume that orange juice contains about 50 mg. ascorbic acid per 100 cc., tomato juice 17 mg., and pineapple juice 10 mg. In his approximation of prophylactic doses he can consider 50 cc. of orange juice (containing 25 mg. of ascorbic acid) as a nutritional unit, equivalent to 150 cc. of tomato juice or 250 cc. of pineapple juice. The effect of usual home procedures can be ignored, although storage for more than two days, even in the icebox, has a progressively destructive effect on the vitamin.

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CONGENITAL POSTERIOR URETHRAL VALVE CAUSING RENAL RICKETS*

Report of a Case

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ALTHOUGH many earlier observers[1-3] reported cases of late rickets associated with renal disease, Barber[4] in 1921 was the first to designate "renal rickets" as a clinical entity. He defined it as "a condition of children marked by stunted development, often associated with bone deformities of the 'late rickets' type and symptoms of a uremic character, due to severe renal insufficiency, frequently of congenital origin." The following case of renal rickets is reported because the etiologic obstructive lesion was demonstrated during life by proper methods of urethrography. This lesion is often overlooked unless visualization of the urethra is obtained.

CASE REPORT

A. W., a 16-year-old, native boy, entered the Beth Israel Hospital on June 30, 1937, with the complaint of knock-knees of 1 year's duration. The family history was negative. The past history revealed his birth weight to have been 7 pounds. He was breast-fed during the first 3 months of his life. His first teeth appeared at 5 months. Bilateral undescended testes were noted by a physician at that time. At 14 to 15 months of age he stood up, and at 18 months he walked. Bed-wetting and dribbling of urine were first observed at the age of 3. The mother was told at that time that the patient suffered from pyelitis. Between the ages of 5 and 7 he had had pertussis, chickenpox and measles. Urinary incontinence was present from the 3rd to the 10th year of his life, and up to 1936 he had nocturnal enuresis. Repeated urine examinations revealed pyuria. The mother noted the patient to be puny and of poor color. At the age of 11, after he had moved to a suburb, he developed asthmatic attacks in May and November, and after 2 years these attacks occurred throughout the year. He did very good work in school, and up to May, 1936, had repeatedly received "A" in posture. At that time, knock-knees, a duck-like gait and a left inguinal hernia were first noted.

On July 21, at another hospital, left herniorrhaphy and left orchiopexy were performed. Two urine examinations revealed the specific gravity to be 1.004 and 1.010, with a very slight trace to a trace of albumin. The sediments showed abundant pus cells. On December 29, 1936, x-ray examinations were reported as follows: "The bones forming the shoulders show an increase in the amount of cartilage at the epiphyseal lines; the bony trabeculations are unusually large and coarse. The same changes are present in all the bones. There is slipping of the epiphyses of both femoral heads." Further studies revealed persistent albuminuria, pyuria, loss of concentrating ability, normal blood pressure and a basal metabolism of −12 per cent. On discharge from that hospital on January 13, 1937, the diagnoses were: "Achondroplasia, hypothyroidism and hypopituitarism." Because of failure to improve, the patient came to the Beth Israel Hospital on June 30, 1937.

Examination on admission revealed an undersized, alert boy with adenoid facies, sallow complexion and uriniferous breath. The height was 56 in., and the weight 74 lb. The skull was dolichocephalic. The skin was pallid yellow. The fundi were normal. The thyroid gland was symmetrically enlarged. The thoracic cage showed increased anteriorposterior diameter, wide flaring of the costal margins and Harrison's groove. A rachitic rosary was palpated. The heart was not enlarged and presented normal rhythm, good quality of sounds and no murmurs.

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The blood pressure was 108/68. The lungs were clear. The abdomen was protuberant. Neither testis was palpated in the scrotum or inguinal canal. A marked degree of genu valgum was present without discomfort of the knees on motion (Fig. 1). Enlargement of the wrists and ankles was noted. The armpits revealed numerous black hairs. The pubic region showed a good supply of

FIGURE 1. *Photograph of the Patient Taken Nine Months before Death, Showing Genu Valgum.*

hair with a typical male distribution. The chin and cheeks showed a moderate amount of short, fuzzy hairs.

Numerous urine examinations showed a specific gravity ranging between 1.004 and 1.010, with a very slight trace to a trace of albumin in all specimens; centrifugal sediments revealed from 1 to 15 white blood cells and rare red blood cells per high-power field. The red-blood-cell count ranged between 2,350,000 and 3,050,000, with a hemoglobin between 46 and 62 per cent (Sahli). The white-blood-cell count fluctuated between 6500 and 8200; two differential counts showed 16 and 2 per cent eosinophils and 61 and 65 per cent polymorphonuclears. Stool examination was negative for occult blood. Blood Hinton and Kahn reactions were negative. The blood sugar was 77 mg. per 100 cc., the nonprotein nitrogen 111 to 126 mg., the creatinine 4.76 to 5.4 mg., the calcium 8.8 to 9.8 mg., and the phosphorus 5.9 to 7.0 mg.; the total serum protein was 5.0 to 6.5 gm. per 100 cc., the albumin 3.1 to 5.2 gm., and the globulin 1.3 to 1.4 gm.; the blood carbon-dioxide combining power was 27 vol. per cent. The serum phosphatase was 2.01 and 1.91 Kay units on two occasions. The basal metabolic rate was +7 per cent. On two occasions after the intravenous injection of 6 mg. of phenolsulfonephthalein, there was no excretion of the dye in 1 hour.

On x-ray examination the cranial bones were thin, ground-glass in appearance and peppered with numerous small round areas of increased density. There was no evidence of increased intracranial pressure or other abnormalities. All the long bones exhibited a moderate degree of osteoporosis. The epiphyses were irregular and showed definite cupping, abnormal development and irregularities. The epiphyses of the upper ends of the humeri, ulnae, radii and femora were partially dislocated. There was an ovoid area of increased radiance in the upper portion of the shaft of the left tibia (Fig. 2). The lower portions of the shafts of the right radius, left ulna and left radius were slightly bowed. The lower epiphyses of the middle phalanges, the lumbar vertebrae and the sacrum showed increased density. The lung fields were not remarkable. The anterior portions of the ribs were knobbed, widened and cupped. The ribs and scapulae showed slight decalcification.

Intravenous pyelography was not undertaken because of the presence of severe renal insufficiency. In order to rule out the presence of a congenital anomaly of the bladder and urethra, a cystogram and urethrogram were taken on July 21, 1937. After 650 cc. of a 2.5 per cent solution of sodium iodide had been introduced into the bladder, the patient began to experience a sense of fullness. His bladder capacity was many times greater than normal for a 16-year-old boy. The cystogram showed the bladder to be markedly dilated, with pouching in its upper border and a slight depression of its base. The urethrogram revealed widening of the prostatic urethra. A filling defect in the upper left border of the dilatation

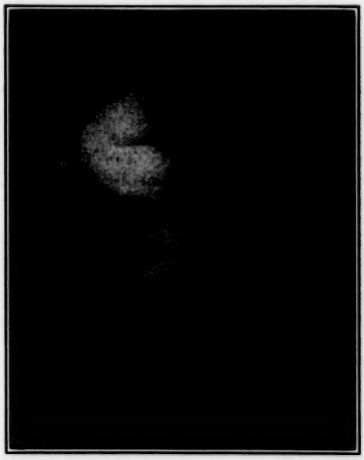

FIGURE 2. *Roentgenogram Showing an Ovoid Area of Increased Radiance and Woolly Changes in the Metaphysis of the Tibia.*

was consistent with a urethral valve of congenital origin (Fig. 3).

As a result of the above findings, a suprapubic cystotomy for drainage was performed under local anesthesia on July 28, with the hope of subsequent surgical relief of the urethral obstruction. The bladder revealed a marked cystitis cystica. The trigone could not be outlined. The internal urethral orifice was atonic, leading to a dilated supracollicular prostatic urethra, but it was impossible to determine whether there were valves distal to this cavity.

FIGURE 3. *Urethrogram and Cystogram during Voiding Showing Filling Defect in Prostatic Urethra and Bifurcation of Urethral Channel.*

On the posterior bladder wall there were two transverse ridges forming dilated pockets, the uppermost resembling a patent urachus. The ureteral orifices could not be visualized. A No. 34 Pezzar catheter was placed in the bladder, and a Penrose drain was inserted in the prevesical space. Thereafter the case ran an uneventful course, the suprapubic wound healed gradually, and the sutures were removed on August 1 and 2.

During the remaining month of his hospitalization, the patient continued to be alert and symptomless. It is significant that following the institution of suprapubic drainage and a daily urinary excretion of about 3000 cc. there was no change in the kidney function (Table 1).

slight funneling in the region of the prostatic portion of the urethra.

The patient was discharged on August 28. The diagnoses were: "Renal rickets, congenital urethral obstruction, cystitis cystica, cryptorchidism, hydroureters and bronchial asthma."

FIGURE 4. *Photograph Showing Small Contracted Kidneys, Hydroureters, Thickened Shrunken Bladder, Ectopic Right Testis Attached to Right Ureter and Dilatation of Prostatic Urethra.*

He returned to the Outpatient Department of the Beth Israel Hospital on six occasions over a period of 7 months. The suprapubic catheter functioned properly, and the patient did very well until smoky urine was noted for 2 days beginning January 24, 1938. On January 26 a blood clot was passed through the cystotomy tube. On March 16 the patient reported that his urine had been grossly bloody for a week, that he suffered with weak spells characterized by rapid heart action and faintness and that he had experienced episodes of stiffening of his index fingers lasting from several minutes to 3 or 4 hours. Examina-

TABLE 1. *Representative Laboratory Findings.*

	Urine Findings					Blood Chemical Findings						
			Centrifuged sediment			Non-protein nitrogen	Creatinin	Phosphorus	Calcium	Total protein	Carbon dioxide combining power	Blood pressure
Date	Specific gravity	Albumin	White blood cells	Red blood cells	Casts	mg. %	mg. %	mg. %	mg. %	gm. %	vol. %	mm.
1937												
7/1	1.010	S.T.	6-12 (clumps)	Few	0	111	4.7	7.0	9.8	5.0	27.6	110/50
8/5	1.006	T.	15-20	0	0	109	7.3	6.6	9.9	6.5	14.6	110/60
1938												
3/16	1.012	T.	0-2	Many	0	143	6.3	6.4	6.7	6.7	42.4	128/70

On August 27 a cystogram was performed through the cystotomy tube. The bladder appeared considerably smaller as compared with that in the films of July 21. There was a moderate degree of reflux into the lower portion of the left ureter, which appeared to be dilated. The base of the bladder was considerably thickened, and there was

tion revealed pallor of the skin, uriniferous breath, normal heart findings and absent Chvostek and Trousseau signs. Urine examination showed a grossly bloody urine. The blood nonprotein nitrogen was 143 mg. per 100 cc. During the following month the patient became weaker; he lapsed into coma and died on April 28.

Autopsy. Autopsy was performed by Dr. George White 12 hours after death. The kidneys were extremely small (Fig. 4), each measuring 7 by 3 by 2 cm. There were numerous adhesions between the kidney capsules and the renal beds. The capsules of the kidneys were irregularly thickened and markedly adherent to the underlying renal tissue and were stripped with great difficulty. The surfaces of both kidneys were studded with about a dozen thin-walled cysts varying from 1 to 2 cm. in diameter. The contents of these cysts were clear and colorless. At the lower pole of the right kidney was a thick-walled cyst measuring 3 cm. in diameter, the lining of which was smooth. There was no communication between the cyst and the pelvis of the kidney. Section of the kidneys revealed increased resistance, and the cut surfaces showed considerable distortion of the renal markings. The cortex was thinned and indistinctly demarcated. The medulla was irregular in outline. The calices and pelves were dilated, and the mucous membrane smooth. Microscopically, the renal tissue between the capsule and the pelvis was markedly reduced and was composed of scar tissue, few glomeruli and scattered tubules, many of which were dilated. Nests of small round cells were seen in the fibrosed areas. Many glomeruli showed varying degrees of fibrosis, increased cellularity and, rarely, adhesions between the capsules and the tufts. No crescents were seen. The cysts which were noted on gross examination were lined by a capsule of fibrous tissue; they were not large or numerous enough to compress the parenchyma to a significant degree. The pelvis showed a thickened subepithelial fibrosed layer, with occasional collections of lymphocytes. The arteries and arterioles revealed no abnormality.

The ureters were elongated, tortuous and extremely dilated. The surface of the ureters was markedly congested, with many of the small veins standing out prominently. There was no obstruction along the course of either ureter. The ureterovesical orifices were patent.

The urinary bladder revealed the cystotomy opening to be well healed, with no leakage of urine around the cystotomy tube. After removal of this tube, a small amount of hemorrhagic urine was found in the bladder. The bladder wall was markedly thickened, measuring 1.5 to 2 cm. The bladder appeared to be somewhat contracted around the Pezzar catheter. The mucosa was reddish-brown in color, thickened, hemorrhagic and markedly friable. It was thrown up into prominent folds almost polypoid in appearance in many places. Although the mucosa presented a markedly hemorrhagic appearance in some areas, no ulcerations were demonstrable. The lumen of the Pezzar catheter and several areas of the mucosa revealed phosphatic depositions. Microscopically, the mucosa showed acute necrosis and occasional round-cell infiltrations; the submucosa was thickened and fibrosed. Evidence of acute inflammation was absent. The muscularis contained interlacing fibrous tissue and rare perivascular collections of round cells. The adventitial coat revealed an increase in fibrous tissue, and the loose venous plexus around the bladder was thrombosed.

The prostatic portion of the urethra was patent, and the verumontanum was normal in size. Beginning at the verumontanum and extending along the course of the urethra for a distance of 3 cm. was a thin, fibrosed, valvular structure consisting of a ridge-like fold extending downward from the verumontanum and dividing into two membranous sheets, the outer edges of which were attached to the rectal, lateral and pubic walls of the urethra (Fig. 5). A stream of water directed along the urethra toward the bladder produced a flattening of the valve against the wall of the urethra, indicating that no obstruction was present. When a stream of water was directed distally from the bladder, the valve became apparent and stood out quite prominently, producing definite obstruction. The urethra proximal to the valve appeared to be slightly dilated in contrast to the distal portion. The remainder of the penile urethra was smooth in appearance and showed no evidence of stricture or valve formations.

FIGURE 5. *Photograph of Urethra and Bladder Showing the Posterior Urethral Valve* (V).

The penis was well formed. The scrotum was small and shrunken. The right testis was found to be adherent to the lower portion of the right ureter. The left testis was firmly bound down in the scrotum by dense fibrous adhesions. Both testes were very small and atrophic in appearance. Microscopically, diffuse fibrosis of the testes and epididymes was present. Spermatogenesis was absent. Rare, small, interstitial pigment-laden cells were seen. The ducts were not distended. Several tubules showed dark-blue-staining clumps, typical of calcification. The prostate was small. The vasa deferentia were not remarkable.

The parathyroid glands were enlarged (Fig. 6) and grayish-brown. The measurements and weights were as follows: left upper, 10 by 4 by 2 mm. (132 mg.); left lower, 11 by 7 by 5 mm. (170 mg.); right upper, 10 by 4 by 2 mm. (90 mg.); right lower, 11 by 6 by 4 mm. (157 mg.); combined weight, 549 mg. Microscopically, dense cords and masses of cells were seen, with a tendency toward adenomatous and papillomatous formation in some areas. Slightly enlarged chief cells predominated and

many showed vacuolization. Oxyphil cells were increased, and the intercellular fat cells were decreased in number.

Examination of the inner surface of the anterior thoracic cage revealed a series of knoblike protuberances at the costochondral junctions, measuring 2 to 3 cm. in diameter. Microscopically, the lines of ossification at the costochondral junctions were very irregular and distorted. The junctional cartilage cells were not arranged in columnar formation. No evidence of ossification was seen in the rare proliferative cartilage cells. Adjacent to the areas of

FIGURE 6. *Photograph Showing Enlarged Parathyroid Glands* (P).

cartilage cells were areas of extreme fibrosis extending from the cartilaginous zones into the marrow spaces of the shaft.

The heart was not enlarged or dilated and showed no abnormality of the endocardium, myocardium or coronary arteries. The aorta manifested no abnormality of its diameter or evidence of sclerotic change. There was no calcification in any of the arteries or about the joints.

The rest of the autopsy findings were negative.

In the reported cases of renal rickets, the pathological findings in the genitourinary tract have been glomerulonephritis,[5] congenital polycystic disease of the kidneys,[6] calculus pyelonephritis,[7] chronic interstitial nephritis,[8] hydronephrotic atrophy secondary to unexplained urinary retention occurring at the level of the urethrovesical sphincter,[9] renal calculi,[10] phimosis,[11] congenital malformation of the urethra,[12] collar-neck obstruction of the urinary bladder,[13] congenital dilatation of the ureters,[9, 14] and congenital hypoplasia of the kidneys.[15]

Since many of the reported cases of renal rickets are due to congenital obstruction of the lower urinary tract, it is very essential to determine the cause of the obstruction as early in the life of the patient as possible so that the necessary surgical treatment may be instituted. It is only by these means that renal insufficiency and the secondary changes in the bones can be prevented. In Kretschmer's[16] recently reported study of 101 cases of hydronephrosis in infancy and childhood, he found the cause for lower urinary tract obstruction in each case. He emphasized the fact that obstructing lesions at or in front of the neck of the bladder did not occur in girls. He also noted that patients came under observation late in the course of the disease, at a time when far advanced destruction of the kidneys had occurred, months or years after the diagnosis should have been made. This occurred in the case of congenital valvular obstruction of the urethra which is the subject of the present report.

Congenital valvular obstruction of the urethra is a well-recognized condition[17] and has been found only in the male urethra. The most severe obstructions will give rise to the earliest symptoms. In the mild cases, puberty may be reached before the kidneys are sufficiently damaged for symptoms of uremia to be manifest; in others, intractable enuresis or urinary infection may appear, the latter proving to be quickly fatal or else very resistant to treatment. Marked hypertension sometimes results, the patient dying from this complication before renal insufficiency has occurred.

Enuresis with or without pyuria or persistent pyuria alone demands complete urological investigation. Many observers have reported cases of dilatation of the bladder and ureters in children and have failed to investigate adequately the urethra and vesical neck for obstructive lesions. Urethroscopy is technically a difficult procedure in male children, and often does not yield adequate diagnostic information. A survey of the literature failed to reveal reports of cases of renal rickets in which antemortem observations of the urethra were made.

Many of the shortcomings of urethroscopy are overcome by urethrography. A technic of urethrography has been recently developed and described by one of us (M. L. B.[18]). It is a relatively simple technical procedure which minimizes the dangers of trauma and secondary infection. Urethrography gives a composite picture of the urethra from the vesical neck to the meatus, and in male children will reveal meatal stricture, diverticula of the urethra, strictures, hypertrophy of the verumontanum, congenital posterior valves and contraction and relaxation of the vesical neck.

In this case, the long history of dribbling, incontinence and enuresis, together with the persistent pyuria, suggested the possibility of urethral

obstruction. A cystogram revealed a dilated, atonic bladder with reflux into both ureters. These findings suggested a lesion distal to the bladder. A urethrogram showed an irregularly deformed, dilated, prostatic urethra with a filling defect in its left portion, situated so as to divide the posterior urethra into two narrow irregular channels.

The autopsy corroborated the urethrographic findings of a valve in the posterior urethra as the cause of the obstruction. The bladder size was markedly diminished as compared to the cystogram taken nine months previously. This was due to the long-continued suprapubic drainage. The tone of the upper urinary tract, however, was not restored.

The unusual features about the case here discussed were the advanced age of the patient and the absence of hypertension.

The roentgenological appearance of the skeletal changes in our patient were similar to those described as "Type B" by Parsons,[21] Price and Davie[22] and others.[23]

Renal insufficiency of long duration produces parathyroid hyperplasia.[24, 25] The combined weight of the parathyroid glands of our patient was 549 mg. Microscopic examination revealed the typical chief cell, thus indicating secondary hyperplasia.[26] The presence of parathyroid hyperfunction was not indicated by the Hamilton and Highman test[26] on two occasions.* The phosphatase content of the serum was increased.

SUMMARY

Clinical, chemical, roentgenological and pathological studies made on a sixteen-year-old boy, suffering from renal rickets due to renal insufficiency secondary to urinary obstruction by a congenital posterior urethral valve, are presented.

The need for careful urological investigation of children with urinary incontinence and persistent pyuria is emphasized.

The value of urethrography in the diagnosis of congenital urethral malformations is discussed.

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*The findings with the Hamilton and Highman test in this case, together with a discussion of their significance, have already been reported.[27]

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ALCOHOLISM AND ATTEMPTED SUICIDE*

A Report of 143 Cases

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WHAT relation, if any, is there between alcoholism and suicide? This question has never been definitely answered and little has been written about it. Medical literature contains isolated case reports — usually incomplete — on alcoholism and suicide or attempted suicide, statistical references, usually vague and often meaningless, and moralistic articles considering alcoholism and suicide jointly or separately as vice. In the entire literature of medicine hardly more than twenty acceptable articles on this subject are recorded. So far as is known no group of cases has been presented from a clinic where fairly uniform standards of diagnosis and treatment obtained, and where fairly uniform social conditions and general attitudes existed. This study, based on a survey of the records of 143 alcoholic suicidal patients admitted to the Boston City Hospital in recent years, is presented in an attempt to provide a partial answer to this question. All these patients were in the habit of drinking alcoholic liquors to excess, and were under the influence of alcohol at the time of the suicidal attempt or had attempted suicide shortly after drinking. Only a few superficial formulations about these patients as a group can be made. Nor can a differentiation be made between the alcoholic suicidal patients and the suicidal alcoholic patients, though there is certainly a distinction between the two. More detailed study of individual cases would be necessary for a deeper analysis of the problem.

Incidence

From 1915 to 1939, approximately 25,000 alcoholic patients were admitted to the Boston City Hospital. During the same period, 1195 patients were admitted after attempting suicide. Of these latter, only 143, or 11 per cent, were alcoholic. Among total alcoholic admissions at the Boston City Hospital those patients who have attempted suicide constitute an extremely minute fraction. Thus, among alcoholic cases the care of those who are suicidal is a negligible problem, whereas considering all suicidal cases, the alcoholic cases make up an important group. Among those patients the problem of immediate concern is that they are suicidal and require special handling and study.

If it be true, as some writers suppose, that alcoholism and suicide represent varying forms of a self-destructive drive, one may wonder why they so seldom coincide. It appears that such a drive ordinarily may be worked out in the one form or the other, but seldom in a combination of both. It is understandable that alcohol, as a more personally and socially agreeable and less strenuous pattern, should be more frequently adopted. Though alcoholism and suicide may be only symptoms of a more fundamental personality disorder, it is clinically convenient to treat each manifestation as a syndrome and their concurrence as a syndrome.

TABLE 1. *Yearly Admissions According to Sex.*

YEAR	MEN	WOMEN	TOTAL
1915	3	0	3
1916	3	2	5
1917	3	2	5
1918	2	1	3
1919	0	2	2
1920	2	0	2
1921	1	1	2
1922	0	2	2
1923	3	2	5
1924	2	1	3
1925	5	1	6
1926	10	3	13
1927	5	2	7
1928	3	1	4
1929	2	1	3
1930	10	5	15
1931	4	1	5
1932	8	1	9
1933	7	3	10
1934	3	5	8
1935	12	5	17
1936	1	1	2
1937	8	3	11
1938	1	0	1
Totals	98	45	143

The admission rate for the years included in this study has been fairly uniform except for a slight rise in the years 1926, 1930, 1935 and 1937 (Table 1).

Sex Distribution

In this group of 143 patients there were 98 men and 45 women (Table 1). Thus the ratio of men to women was 2:1, whereas among general suicidal patients women outnumber men in the proportion of 6:5.[1] Among all alcoholic admissions there were five times as many men as women.[2] Thus the sex distribution of alcoholic suicidal patients corresponds more closely to the

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group of alcoholic patients than to the suicidal group considered separately.

Age Distribution

In this series the greatest number of suicidal attempts among alcoholic individuals occurred between the ages of thirty and forty for both men and women (Table 2), whereas among non-alcoholic suicidal patients the peak is from twenty-six to thirty for men and from twenty-one to twenty-five for women.[1] There were few alcoholic suicidal patients between the ages of fifty and seventy, although among general admissions to the hospital patients in these age groups are very numerous.

TABLE 2. *Age Distribution by Decades.*

AGE GROUP	MEN	WOMEN	TOTAL
20–30	23	13	36
30–40	35	14	49
40–50	21	9	30
50–60	12	8	20
60–70	3	0	3
70–80	2	0	2
Unknown	2	1	3
Totals	98	45	143

Previous Social Adjustment

Although all these 143 cases vary considerably in detail, appearing quite constantly in each are conditions of social maladjustment, occupational, marital or economic.

The histories obtained constantly stress breakdown of the patients' personal adjustments, and development of symptomatic drinking (often in the pattern of addiction) and episodic emotional or aggressive crises often preceded by depression and bewilderment. How common these conditions are among suicidal patients who are not alcoholic it would be difficult to determine. Since this same general pattern of breakdown can and often does occur in other forms, it is interesting to note that only 4 patients in this series were considered sufficiently ill mentally to be committed as insane, although some of the other 139 patients may have been temporarily irresponsible owing to alcohol and its effects. When these patients became sober and recovered they were for the most part embarrassed and discouraged, although still obviously confronted and disturbed by various psychological and social difficulties. It is, of course, possible that many of these cases, not frankly psychotic, may have had prepsychotic personalities or may have suffered from constitutional psychopathic inferiority or hysteria.

Economic Status

The patients admitted to the Boston City Hospital are for the most part those who cannot afford private care. Nearly half of all admissions to the hospital in recent years are persons who are receiving financial aid in one form or another.[2] Of the remainder in the top bracket, a small number of patients have an annual income of $1500 or above.

In the group considered in this study, by far the greatest number were unemployed or were of "unknown employment." Few skilled workers were included. This is due partly to the social group from which the hospital draws its patients, and partly to the personality difficulties of this particular group of patients. The pressure produced by the financial problem often appears to be a major factor in promoting a suicidal attempt. Few of these patients have shown much interest in taking advantage of the help toward adjustment offered by the Social Service Department of the hospital.

Motivation

Of all the information obtained about suicidal patients, that about motivation is the most meager and unreliable. In this series 108 out of 143 patients offered no reason, probably in most cases because they were not asked for it. The stated reasons offered by 20 men and 7 women were simple and inconclusive, owing to the patients' own failure to understand their motivations, and to the lack of adequate data from which conclusions could be drawn. The reasons stated were, in broad terms: occupational maladjustment, domestic friction, drunkenness and loneliness, with resultant frustration, deprivation and anxiety. From the information obtained in this study of these patients, it appears that those in the depressive and reactive depression group understood themselves best. Those in the compulsive and hysterical groups understood themselves less well, and the schizoid and epileptoid personalities least of all. The same degrees hold true for the objective understanding of these patients by the observer.

Method of Suicidal Attempt

Poison by mouth was by far the most popular method in this group of attempted suicidal cases, among both men and women (Table 3). Fifty-eight per cent of the entire group used this method. Though a wide variety of poisons were taken by mouth, iodine was by far the leader among alcoholic patients, as among all other groups.[1] The ineffectiveness of iodine as a poison is probably not consciously realized by the majority of those who attempt suicide (a study of 327 cases of attempted suicide by iodine ingestion revealed no fatalities[4]). It is natural that most of

the poisons used by these patients should be substances that are common in the home and are usually marked *Poison*.

The inhalation of illuminating gas ranked second among men and among women, being the method used by 11 per cent of the patients. Other less frequently used methods were slashing, jumping from high places, hanging, immersion and firearms. Two men attempted suicide by combined methods. One patient cut his wrist and turned on the gas, and another cut his throat and attempted to drown himself. No woman attempted suicide by combined methods.

TABLE 3. *Methods of Suicidal Attempt.*

	MEN	WOMEN	TOTAL
Poison by mouth	49	34	83
Inhalation of gas	12	5	17
Leaping	9	4	13
Slashing	10	1	11
Hanging	8	0	8
Immersion	7	1	8
Firearms	1	0	1
Combined methods:			
Cut wrist and inhalation of gas	1	0	1
Cut throat and immersion	1	0	1
Totals	98	45	143

Poison by mouth was the method used by 5 of the 7 patients who were successful in their suicidal attempts. No patient in this series attempted suicide by using alcohol alone, as a poison taken by mouth.

Outcome

One hundred and thirty-six, or 95 per cent, of these patients were unsuccessful in their suicidal attempts; 89 (60 men and 29 women) were discharged relieved after symptomatic treatment and a brief stay in the hospital (Table 4). Twenty-five more (16 men and 9 women) were discharged against advice before studies and treatment had been completed. Five patients, all men, were transferred to the Nerve Service or the Out-Patient Department for further treatment. Four men were considered sufficiently psychotic to require transfer to a mental hospital after emergency treatment. In 13 the outcome was undetermined.

TABLE 4. *Outcome.*

OUTCOME	MEN	WOMEN	TOTAL
Discharged relieved	60	29	89
Discharged at own request, against advice	16	9	25
Discharged to Nerve Service	2	0	2
Discharged to Out-Patient Department	3	0	3
Transferred to other institutions	4	0	4
Outcome undetermined	9	4	13
Died in hospital	4	3	7
Totals	98	45	143

Only 7, 5 per cent, of the 143 alcoholic suicidal patients died in the hospital as a result of their attempts. During the same period 11 per cent of the total number of all suicidal patients died as a result of their attempts. From this it may be inferred that alcoholic patients are less successful as a group than suicidal patients in general, or that alcoholism prevents suicidal patients from succeeding.

It is not easy to explain why so many of the patients in this series were unsuccessful in their attempts at suicide. It is rarely possible to state whether an attempted suicide is a gesture or is bona fide. The failures were chiefly due to the ingestion of essentially non-poisonous substances or sub-lethal doses when poisons were taken by mouth, quick and effective interference by relatives and friends after the attempt had been made, and adequate and prompt medical and surgical treatment (antidotes, gastric lavage, resuscitation, stopping of hemorrhage and so forth) at the hospital.

An additional factor, and a most important one, was the alcohol itself, which in many cases appeared to derange, inhibit or render generally less efficient the technic and planning used in carrying out the suicidal attempts. The records of these 143 cases, incomplete as they often are, give strong evidence on this last point.

SUMMARY

The findings in 143 cases of alcoholism and suicide are reported concerning the following topics: incidence, sex, age, previous social adjustment, economic status, motivation, method of suicidal attempt and outcome. The findings indicate that alcoholic suicidal patients as a group are less successful than suicidal patients in general. Attention is drawn to the meagerness of present knowledge concerning details of personality, motivation and psychological mechanisms in alcoholic suicidal patients, and to these problems in their relation to social and psychological medicine.

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REPORT ON MEDICAL PROGRESS

OBSTETRICS: LABOR AND DELIVERY

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ELECTIVE INDUCTION OF LABOR BY RUPTURE OF MEMBRANES

THE physiological precipitants of labor at term, though unidentified, have long been subject to the call of castor oil and quinine, and of the bougie or bag. Before cesarean technic offered a better method, this was the chosen escape from anticipated disproportion, and even yet is frequently employed in the prophylaxis of eclampsia. Castor oil is nauseous and its results are uncertain. To quinine some parturients and some fetuses are inordinately sensitive. By its use the uterus may become hypertonic and the contractions prolonged and intense; the susceptible fetus may suffer serious damage to its auditory nerves.[1] The bougie and the bag easily introduce infection, and the former may cause retroplacental hemorrhage. Rupture of the membranes, whether spontaneous or artificial, has long been recognized as incident to both the beginning and the end of labor. During the last decade the conception of the physiology of these membranes and of their function has undergone a significant change, which has radically affected our attitude toward elective induction of labor and the methods employed for its accomplishment.

Formerly the intact bag of forewaters was considered a hydrostatic wedge which facilitated dilatation of the cervix, and "dry labors" were expected to be prolonged because the cervix had been deprived of this aid. We now believe that the os is enlarged because of an upward migration of the muscle fibers, which exert centrifugal traction on the rest of the cervix. If the intact membranes are young, tough and tenaciously applied to the internal os, this dilatation is made more difficult. The enlargement of the os proceeds without such interference when the membranes break contact with the internal os. Their degeneration with age usually accomplishes this during the last few days preceding the onset of spontaneous contractions. The same release of the cervix occurs if the membranes break or are ruptured. Many are the statistical reports[2-5] asserting that labor is shorter if the membranes have opened before or soon after the beginning of labor; and common in the experience of almost all obstetricians is the prompt recovery of progress in dilatation which had been suspended, sometimes for several hours, in the course of labor when tough membranes are broken by instruments.

In November, 1928, the exceptionally able and resourceful Dr. Delbert Jackson,[6] after convincing experience, proposed in an address to the Boston Obstetrical Society the elective induction of labor at term in normal cases by instrumental rupture of the membranes, followed in most cases by small doses of pituitrin. Numerous authorities, especially in America, have confirmed the effectiveness of this method, and agree that the duration of labor is thereby diminished, but almost all have insisted on a few specific dangers. As there are several obvious desiderata for all those concerned in the termination of pregnancy on a prearranged date, the employment of this method is spreading widely, and has even been presented to the laity as authoritatively approved. It seems proper, therefore, while not at all condemning a procedure so helpful when used with circumspection, again to emphasize the dangers inherent in its indiscriminate application.

The statistical studies of puerperal morbidity have repeatedly shown that its incidence increases with hours of labor following rupture of the membranes. The pathological sequence is not clearly understood. Possibly the membranes themselves, which have a low resistance, are more readily infected if torn, and transmit the infection to the endometrium. Spontaneous rupture of degenerated membranes is probably commoner than that of healthy ones,[7] and infection of the former is doubtless also more likely. The close application of the membranes to that portion of the uterus which finally becomes the rim of the dilated os must protect the endometrium from the bacteria in the cervix. A rent in the sac over the internal os possibly extends as dilatation progresses until it splits the membranes attached to the lower margin of the lower uterine segment, thus denuding the endometrium there and exposing it to infection. It appears that normally and ideally the intact ovisac separates from around the periphery of the os for 1 to 3 cm. during the last

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few days before labor begins spontaneously. This lifting of the membranes may conceivably have something to do with the starting of labor, for it may involve stimulation of the sympathetic fibers of the os by the trauma of separation. We know from the study of biology and from obstetric and gynecological experience that there is a close relation between stimulation of the nerves of the internal os and the sympathetic stimulation of the pituitary gland,[8, 9] which is doubtless prominently involved in labor. It would be interesting to observe the effect on selected patients at term of merely lifting the membranes from their attachment as far as the finger could reach through the internal os, together with digital pressure on the rim of the internal os. Possibly these steps alone would be effective. Very obscure is any reason why release at term of sometimes only a few cubic centimeters of amniotic fluid should be the critical factor in evoking the contractions which almost always promptly follow. The amount of liquor which escapes does not seem to be significant. Perhaps it is equally insignificant whether or not any escapes.

We dwell on this detail, for there is danger of infection with prolonged labor after rupture of the membranes. If the purpose for which elective rupture is done at present could be fulfilled without it, induction would be safer. Until such time, the considerate and perspicacious physician will not select for induction by present methods a patient whose long, firm cervix presages a lengthy first stage of labor, nor apply the procedure to any patient until approach to term has effected a partial effacement, softening and dilatation of this crucial organ.

Nor is this expedient available in any pregnancy at term with possible disproportion or abnormal presentation. In either case labor may be prolonged or preferably terminated by delivery from above. Although the improved technic of extraperitoneal approach which Waters,[10] of Jersey City, has proposed (see below) and will soon present in the literature notably diminishes the risk of cesarean section following so-called dry labor, it remains more than folly wilfully to expose a patient to certain risk for the sake of a theoretical escape. Prolapse of the cord with vertex presentations is rare unless intrafundal manipulation, usually for rotation or version, lifts the head above the inlet. Elective induction by rupture is hardly defensible if anything but the vertex is presenting in a clearly adequate pelvis. It is as yet approved by its more judicious proponents only when in such cases of normal presentation without a suggestion of disproportion the pregnancy is at term and the cervix is short, soft, already patulous and without a previously acquired reputation for dystocia.

RELIEF OF PAIN DURING LABOR

In spite of a few voices whose calling would sound better in the pre-Victorian wilderness of midwifery than in modern medical discipline, endeavors to make labor painless as well as safe and productive still proceed. One woman physician[11] says: "Childbearing is so essential an experience to a woman that the thwarting [*sic*] of its normal course by the excessive [*sic*] use of analgesics may cause damage to her personality." An eminent obstetrician[12] with no discernible evidence of tongue in cheek writes: "Actually, I have often felt that the women miss something when they are delivered under an anesthetic — the thrill of hearing their baby's first cry. Labor must be tame for these women. . . ." Defying the published statistics from several clinics, rather exceptionally equipped with talent and facilities, to be sure, he later says: "Neither in theory nor in practice is there a harmless anesthetic or analgesic." Intelligent and discerning physicians may not condemn such statements, but neither are they impeded by them. The propriety of relieving any useless, purposeless pain, even though it be associated with such an instinctive and passionately sentimental function as reproduction, needs no argument. If the partial achievement of such relief, as is rapidly becoming the case with discriminating analgesia during labor, diminishes the net mortal danger, it becomes obligatory.

Chloroform and ether alone were boons in their time; nitrous oxide was a welcome addition. Novocain has its special uses. Morphine and scopolamine, at a price, showed how comfortable labor could be made. Now the barbiturates[13, 14] and paraldehyde[15] take an honored place among these merciful agents. They are all potentially dangerous, to be sure, but so is digitalis, and even ethyl alcohol. Like these latter drugs, they must be used with close regard to their toxic effects on patients whose peculiarities both of constitution and of medical condition are known to offer no contraindication. Thus precautions are taken to prevent evil results, as facilities are also held ready to relieve any unexpected disturbances.

The experience in many clinics during the last decade currently present these conclusions:

1. Morphine, ⅙ gr., or pantopon, ⅓ gr., enhanced by scopolamine, 1/200 to 1/100 gr., repeated alone or together, as necessary, at intervals of three or four hours, is helpful during the first stage of primiparous labor. Morphine or pantopon must not be given unless one is reasonably sure

that delivery will not occur within four hours, because of their depressant effect on the fetal respiratory center. They are therefore not often useful during the second stage of labor or for multiparas.

2. Barbiturates are more safely given by mouth or by rectum than intravenously, although their action is thereby slightly delayed. Pentobarbital and Sodium Amytal are the popular forms, and of these the former acts more quickly and in smaller doses. From 4 to 6 gr. is given, preferably with scopolamine, 1/200 to 1/100 gr., when contractions are well established, and if possible before they become acutely distressing. Pentobarbital, 1½ to 3 gr., is repeated at intervals of three or more hours, or as the patient becomes wakeful; scopolamine, 1/200 gr., is given every three or more hours if she is rational. Barbiturates given by mouth are not dependable if the stomach contains much recently ingested food. Complete narcosis with barbiturates must not be induced by any route if the stomach contains food, for vomitus is often expelled with difficulty, a fact which makes inhalation of food particles easily possible.

3. In addition to the barbiturates and scopolamine, in order to allay undue restlessness, paraldehyde in doses of 4 to 8 cc. may be given by rectum with 30 or 60 cc. of ether in an equal amount of olive or cottonseed (not mineral) oil, once or twice toward the end of the first stage.

4. Nitrous oxide and oxygen, in proportions of 1.0 or 1.5:1, are given during the second stage, and a modicum of ether is added, if necessary, for delivery.

5. For obvious reasons the patient must never be without competent, contiguous supervision.

6. While barbiturates are not contraindicated in mildly abnormal cardiac conditions, the rare patient whose cardiorespiratory system is unduly sensitive to them, and who therefore develops pulmonary edema, must be promptly supplied with oxygen by tent or mask.

7. The newborn baby, after barbiturates and scopolamine have been used, may not at once cry or even breathe deeply. He may be stimulated, but very gently, as by rubbing or patting on the back, pinching the toes, or immersing the buttocks momentarily in cold liquid. All babies should be drained, and the mucus in the pharynx should be aspirated. Time and delicate appropriate attention will ensure their proper behavior if they have not been unduly traumatized by delivery or smothered by too rich a mixture of nitrous oxide and oxygen. The beginning of normal respiration is encouraged and accelerated by administering oxygen for a short time immediately after ligation of the cord.

It may be deduced from the above that the degree and the safety of obstetric analgesia with the agents at hand critically depend on the ability of the attending physician accurately to perceive the peculiarities of each patient, as well as those of her obstetrical condition and of the quality of her labor, and to apply these agents accordingly. Furthermore, it is clear that the exigencies of such procedures, both maternal and fetal, justify their use only in thoroughly equipped hospitals. Bad results under other conditions call not for the repudiation of analgesia, but rather for improvement of these conditions.

OCCIPITOPOSTERIOR PRESENTATION

Perennially the literature is replete with discussions of treatment of presentation with the occiput posterior. Conservative expectancy is the dominant note. Steadily the experience of able operators convinces us that time and good contractions will result in the rotation of about 80 per cent of posterior vertices when they reach or press on the perineum. The supervised use of analgesics as outlined above makes infinitely easier the strain of delay, which too often in the past was more than the patient or the harassed accoucheur could withstand. Manual rotation of head and shoulders is not difficult in many cases in which spontaneous adjustment fails as the cervix becomes fully dilated. If this has not been accomplished and a posterior vertex is arrested on or near the perineum, some will still no doubt apply forceps twice, according to the method of Scanzoni. This procedure is fast passing from conventional use, since high and mid-forceps are avoided by the tolerance of prolonged but painless labor. Commoner now is the simple method of rotating the blades after cephalic application to a low head. Paine,[18] using Simpson forceps without traction, describes his excellent method as follows:

> 1. Time spent in thoroughly dilating the pelvic floor is more than saved in the case of subsequent proceedings.
>
> 2. The left blade is applied anteriorly, starting directly under the symphysis with the handle held to the right of the midline and practically at right angles to the floor. The head is pushed back from the symphysis and the blade guided by a finger through the fenestra.
>
> 3. When the blade has reached its approximate correct position, the handle is held temporarily to the left to permit room for the application of the posterior (right) blade.
>
> 4. The application of the posterior blade begins with the handle held parallel to the right Pouparts, the handle depressed as the blade follows up the hollow of the sacrum. As the blade comes into approximate position, care is taken to keep the handle well toward the right thigh.

5. The handle of the left blade is now brought over to the right and locked with the right blade.

6. The relation of posterior fontanel and sagittal suture to the blade is noted, to indicate a correct cephalic application. Traction is not attempted until a correct application is secured.

7. Beginning traction is sharply downward, in a line as near right angles to the floor as possible, taking extreme care to keep the handles well to the right of the midline. This is necessary to keep the tips of the blades to the left side of the pelvis, i.e., over the face.

If traction is made with the handles in the midline, the blades are thrown over to the right, *toward the occiput*, and if they do not catch under the mastoids will often slip off over the occiput.

BREECH PRESENTATION

Gratifying in the experience of many writers are the results of external version during or at the end of the eighth month. Advising against the use of anesthesia, which may permit undesirably vigorous efforts, most commentators mention the advantage of the extreme Trendelenburg position and of gentleness. If the breech must be born, fortunately at last there is general agreement that it should be allowed to deliver spontaneously, almost always through an incised perineum, unless practically constant oscultation during the second stage detects dangerous fetal embarrassment. Most operators prefer to deliver the trunk by gentle traction on the legs and hips, wrapped in a warm moist towel, ending its delivery with the back uppermost. When the anterior scapula is visible, whichever arm comes out easier is delivered first. Usually this is found to be the anterior arm, and occasionally it has seemed simpler to rotate the shoulders gently so as to bring the second arm also to the anterior position. Before any attempt is made to deliver the head, the right-handed operator is still advised to apply the index and middle fingers of the left hand to the fetal face in order to ensure flexion. If pressure on the vertex from above toward the floor, with no more than the gentlest traction on the body, fails to produce the head, the use of forceps, carefully and deliberately applied, is uniformly recommended. Emphatic caution against haste and vigor is given repeatedly.

PROPHYLACTIC PERINEOTOMY

The refreshingly precise Phaneuf[17] has called attention to the impropriety of applying the word "episiotomy" to discission of the perineum. Dorland[18] defines episiotomy as "the surgical incision of the vulvar orifice laterally for obstetrical purposes." The distinction is useful, for correct use of the word will dispense with the impossible qualification "median" and the redundant "lateral." Happily there is less confusion in the application of the procedure. The prophylactic value of perineotomy, the so-called "median episiotomy," has been frequently affirmed in recent papers from various sources. Its use presupposes adequate surgical facilities for strict asepsis, and personal ability. In the absence of either, local infection is frequent, and if it does occur, is annoying and embarrassing. Symmetrical separation of the perineal body practically always protects the vaginal epithelium from the undesirable laceration of the gutters, which can usually (not always) be attributed to poor technic in the application of low forceps. The operator must furthermore be alert and promptly divide one of the levators laterally if protection of the sphincter demands more room. Repair of the muscle layers is easy with three or four interrupted sutures of even No. 00 chromic catgut. The same material may be used as a subcuticular running stitch to close the vaginal epithelium and the skin of the perineum. As the elimination of exposed knots contributes much to the patient's comfort, one may prefer to anchor the continuous subepithelial suture by starting at the posterior end of the perineal wound and working anteriorly, to finish with a knot in the vagina. Nice approximation of edges is easier if closure begins at the peak of the separation of the vaginal epithelium and terminates at the posterior end of the perineal wound. In order to protect the sensitive skin edges from a knot there which would catch in gauze, one may bring a final stitch out through the skin 1 or 2 cm. lateral to the approximated cut edges. This stitch is kept from retracting by a knot placed close to the exposed surface of the skin. The already stipulated indispensability of asepsis and technical skill is obvious.

CESAREAN SECTION

Although the time has not yet arrived when one can demonstrate the startling contention of some obstetricians that abdominal delivery for the safety of mother and child should supplant all but the simplest of operative vaginal deliveries, current trends and statistics offer seductive considerations. With improvement in general surgical technic and facilities, and in postoperative care, diagnosis and therapeutic resources, the mortality of cesarean delivery in first-class clinics has gradually diminished in the last twenty years to 2 or 3 per cent, although the numbers of patients delivered from above may even have increased. Meanwhile the incidence of high forceps, and in many clinics that of versions, has also diminished. This is partly due to better acquaintance with and more dependence on the nat-

ural forces of labor, and partly, as has already been said, to the fact that safe analgesia permits prolonged submission of patient and physician to slow progress. That fewer patients suffer difficult pelvic deliveries is also due, however, to more accurate identification of disproportion, and readier selection of abdominal delivery in these cases, as well as in cases of transverse position and of placenta previa. (Only for toxic separation of the placenta has vaginal delivery finally gained preference over the previously favored cesarean.[19]) This freedom of cesarean election is largely attributable to improvements in operative methods. Obviously desirable and equally attainable is partial or complete exclusion of the upper abdominal cavity. The approach most commonly selected is still transperitoneal but leads to the lower uterine segment or cervix, where healing is somewhat easier and subperitoneal seclusion of the wound quite simple. Many operators routinely protect the abdominal cavity by suturing a flap of uterine visceral peritoneum to the anterior parietal layer before incising the uterus. The simplest routine precaution is separation of the upper abdominal regions from the operative field by generous packing. The relative merits of transverse and longitudinal incision through the musculature are not clearly apparent in the literature. Both have their eminent protagonists. (The reviewer favors the transverse incision but is deliberate in avoidance of lateral vessels, meticulous in closure of the wound, and fearfully fussy at both its ends.)

The Latsko extraperitoneal approach has served capable surgeons well, and has saved either the uterus or the baby for many patients who were adjudged infected, perhaps by long labor with ruptured membranes, or by previous attempts at delivery. The technic is not easy in practice and threatens the bladder, ureters and large vessels, somewhat in proportion to the operator's facility or experience.

In order to avoid these disadvantages, many will henceforth use a new method which was reported to the New York Obstetrical Society in January, 1939, and to the Boston Obstetrical Society in March, 1939, by Doctor Edward G. Waters,[10] of Jersey City. He convincingly demonstrated the feasibility of exposing the lower uterine segment by extraperitoneal approach in the midline between the parietal peritoneum and the bladder, and laterally through the infraperitoneal areolar tissue. Because he has not yet published his excellent method it would be unseemly to detail it further. Let the reviewer rest with acclaim to Doctor Waters for a very promising improvement, and with exhortation to him to hasten its literary appearance and to obstetricians to give it prompt, judicious attention.

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MASSACHUSETTS MEDICAL SOCIETY

PROCEEDINGS OF THE COUNCIL

Stated Meeting, October 4, 1939

A STATED meeting of the Council of the Massachusetts Medical Society was held in John Ware Hall, Boston Medical Library, 8 Fenway, Boston, on Wednesday, October 4, at 10:30 a.m. The president, Dr. Walter G. Phippen, Essex South, was in the chair, and 188 councilors were present (Appendix No. 1).

The records of the annual meeting of June 7, 1939, were presented by the Secretary as published in the *New England Journal of Medicine*, issue of June 29, 1939. No errors or omissions being noted, the records were approved as printed.

REPORTS OF STANDING COMMITTEES

Arrangements

The chairman, Dr. Augustus Thorndike, Jr., Suffolk, made an informal report in which he stated that the committee had held two meetings, one of which was attended by the officers of the Society and the chairmen of the various sections. It is proposed to hold the annual meeting of 1940 on May 21 and 22 at the Copley-Plaza Hotel in Boston. The plan contemplates two full days in place of the previous two-and-a-half-day session. There is to be a continuous scientific program from 9 to 12 and 2 to 5 each day. The meeting of the Council, the Board of Censors and the Cotting Luncheon are to be held on the first day, with the annual dinner followed by the Shattuck Lecture in the evening. The annual meeting of the Society and the luncheon will be held at noon on the second day. It is hoped to be able to adjourn the meeting at 5:00 p.m. on the second day. The Council voted to adopt the report and subsequently voted to adopt the recommendations of the committee.

Ethics and Discipline

The report (Appendix No. 2) was presented by the chairman, Dr. Robert L. DeNormandie, Suffolk, and was accepted by vote of the Council.

State and National Legislation

A report was presented informally by the chairman, Dr. Charles C. Lund, Suffolk. He said that the committee had followed pending legislation up to the end of the legislative session about August 1. Since the last report of the committee, the nurses' bill had been defeated, and in the opinion of the chairman, the medical profession should act with the nursing group and help to plan a bill for submission to the next assembly of the Legislature. He added that the present act governing the practice of nursing is much in need of revision.

Of the two syphilis bills, originally introduced by Dr. Harry M. Landesman, Norfolk, one was passed; hence, from the first day of November, a blood test for syphilis must be taken at the first visit of all pregnant women to a physician. No penalty is attached, but it is apparent that the public expects a careful examination in all such cases.

The bill introduced by the Society, proposing to set up a form of medical insurance, failed to pass the Senate Rules Committee largely because of the confusion in the legislative program. In the chairman's opinion this was probably fortunate, since such a bill should have very careful consideration and should not be rushed through the Legislature. He suggested that all members of the Society should study the proposed bill carefully in a critical spirit so as to discover its weaknesses. He doubted whether the proposed bill actually provided sufficient protection for the proposed organization, since there are insufficient restrictions concerning the physicians who would be permitted to work under the bill. He quoted from the California experience where each physician desiring to work under the provisions of the bill has to pay a five-dollar fee, in that way providing funds with which to begin operations.

He reported that the Wagner Bill was not passed at the last session of Congress, but that Senator Wagner would undoubtedly introduce a bill in a somewhat different form, in order to meet certain points which have been adversely criticized by different groups.

He reported that Senator Henry Cabot Lodge, Jr., of Massachusetts, had introduced a bill (Senate No. 2963) which may be regarded as an "entering wedge." This bill begins by undertaking to meet a small part of the problem of medical care but might be expanded later into something larger. In the chairman's opinion this is probably a step along the lines insisted on by the American Medical Association as proper for the government to pursue. The bill provides for benefits, under certain conditions to certain people who are insured under the Social Security Act, to the extent of twenty-five dollars per year. The act would be administered by the Social Security Board. In his opinion this bill should be care-

fully studied before it comes up in Congress at the next regular session.

The Council voted to adopt the report.

Membership

The report (Appendix No. 3), which was presented by the chairman, Dr. H. Quimby Gallupe, Middlesex South, recommended that seven fellows be allowed to retire, three allowed to resign, one be deprived of the privileges of fellowship and one be recommended for affiliate fellowship in the American Medical Association. The Council voted to accept the report and to approve the committee's recommendations.

Public Health and Subcommittee on Public Education

The report (Appendix No. 4) was presented by the chairman, Dr. Francis P. Denny, Norfolk, and was accepted by vote of the Council.

Medical Defense

The report was presented informally by the chairman, Dr. Arthur W. Allen, Suffolk. He stated that there has been a marked diminution in the number of suits instituted against physicians. In the chairman's opinion this has been due to the fact that each suit brought has been opposed and that no suit has been settled. There has also been widespread publicity among the profession concerning the ease with which a malpractice suit may be started. He called the attention of the new councilors to the importance of being on the alert for any rumors concerning the institution of a malpractice suit. He announced that it will continue to be the policy of the committee to carry on the old principle of fighting each suit. Since the first of June only one suit has been brought, and it is believed that this will be withdrawn as soon as the attorney discovers that the Massachusetts Medical Society will defend it. The report was duly adopted.

Others

There were no reports from the Committee on Publications, the Committee on Medical Education and Medical Diplomas, the Committee on Permanent Home and the Committee on Financial Planning and Budget.

REPORTS OF SPECIAL COMMITTEES

Postgraduate Instruction

The report (Appendix No. 5) was presented by the chairman, Dr. Frank R. Ober, Suffolk. The Council voted to adopt the report.

Industrial Health

The report (Appendix No. 6) was presented by the chairman, Dr. W. Irving Clark, Worcester. It was duly adopted.

Restoration to Fellowship

The reports of the committees previously appointed to consider petitions for restoration to fellowship were accepted, and the recommendations to restore the following five fellows were approved by the Council:

Emile A. Barrier, Belmont (Committee: Donald E. Currier, Leo A. Blacklow and Fabyan Packard).

David Barron, Brockton (Committee: Alfred L. Duncombe, Fred F. Weiner and Harrison A. Chase).

I. L. Kushner, Somerville (Committee: Edmund H. Robbins, C. Howard Dalton and Louis J. Grandison).

John F. O'Brien, Fall River (Committee: Edward L. Merritt, George C. King and Emery C. Kellogg).

Harold S. Tait, Palmer (Committee: Morgan B. Hodskins, Sidney R. Carsley and Lucy G. Forrer).

Others

There were no reports from the Committee on Cancer, the Committee on Physical Therapy and the Committee on Public Relations.

APPOINTMENTS AND CONFIRMATION OF COMMITTEES

The Auditing Committee chosen consists of Dr. Ezra E. Cleaves, Essex South, as chairman, and Dr. Edwin B. Dunphy, Suffolk.

The President announced his appointment of the committee to support an appropriation by Congress for the construction of a new building to house the Army Medical Library and Museum as follows:

Henry R. Viets, Suffolk, *Chairman*
Robert B. Osgood, Suffolk
Benjamin Spector, Suffolk

The President nominated and the Council approved of a committee to study the practice of medicine by unregistered persons as follows:

Richard Dutton, Middlesex East, *Chairman*
Brainard F. Conley, Middlesex South
Edward F. Timmins, Suffolk

Interim Appointments

The following nominations by the President were approved by the Council: Dr. Peer P. Johnson, of Beverly, as a member of the Council to succeed Dr. Walter G. Phippen, Essex South, Dr. Johnson to be a member of the Committee on Financial Planning and Budget to succeed Dr. Phippen, and Dr. Archibald R. Gardner, Middlesex North, to be one of the voting members of the Associated Hospital Service Corporation of Massachusetts.

INCIDENTAL BUSINESS

The President referred to a recommendation from the Advisory Committee of the Section of Obstetrics and Gynecology to appoint a committee of five to study the question of expert testimony

in court cases. He stated that such a committee was appointed by the Council in October, 1936, but that the committee had never reported and had never been discharged from its duties. He announced that this committee would be asked to render a report. The committee consists of the following:

George L. Schadt, Hampden, *Chairman*
David Cheever, Suffolk
Francis P. McCarthy, Norfolk
Walter G. Phippen, Essex South
James J. Goodwin, Worcester

Upon motion of the Secretary, seconded by Dr. David Cheever, Suffolk, the Council voted to publish the *Directory of the Officers and Fellows*, as of February 15, 1940, at a cost of approximately $2000.

At the June meeting of the Council, Dr. John Fallon, Worcester, had presented a statement on the status of anesthetists under the Hospital Prepayment Plan. The Secretary read a communication from Dr. Wiggin enclosing a copy of the statement asking that it be referred to the proper authorities for final consideration. After some discussion Dr. Channing Frothingham, Suffolk, stated that during the past summer the Associated Hospital Service Corporation had revised its policies and that the new ones have excluded anesthesia from the benefits so that there is no need for further action on Dr. Fallon's reports.

Dr. Henry M. Landesman, Norfolk, referred to the two bills introduced into the Legislature last year by him. One of these bills was passed but the one having to do with the prenuptial test was lost. He therefore introduced a resolution (Appendix No. 7). After some discussion, the Council voted to refer the resolve to the Committee on Public Health.

Dr. John B. Hall, Norfolk, asked for information from some member of the House of Delegates or from the trustee of the American Medical Association, Dr. Roger I. Lee, concerning the disposal of a question which had arisen in the House of Delegates at the last annual meeting of the American Medical Association. This concerned the omission of the designation "col." which has appeared in the *American Medical Directory* following the names of colored physicians. Dr. Lee in reply stated that the Board of Trustees, at its last meeting, had voted to omit this designation in the next directory.

The President stated that there was no provision in the by-laws which required a report to the Society from the delegates chosen to attend the annual meeting of the American Medical Association. In his opinion such a report might be valuable but is not necessarily essential since the full proceedings of the House of Delegates are regularly published in the *Journal of the American Medical Association*, together with such votes as may be taken. The full report is therefore available to all members of the Massachusetts Medical Society.

The meeting adjourned for the Cotting Luncheon at 11:36 a.m.

ALEXANDER S. BEGG, *Secretary*.

APPENDIX NO. 1

ATTENDANCE

BARNSTABLE
M. E. Champion

BERKSHIRE
J. J. Boland
I. S. F. Dodd

BRISTOL NORTH
R. M. Chambers
W. H. Allen
F. H. Dunbar
W. H. Swift

BRISTOL SOUTH
G. W. Blood
E. D. Gardner
H. E. Perry
I. N. Tilden
C. C. Tripp
P. E. Truesdale

ESSEX NORTH
E. S. Bagnall
R. V. Baketel
C. S. Benson
E. H. Ganley
H. R. Kurth
P. J. Look
G. L. Richardson
F. W. Snow
L. T. Stokes
C. F. Warren
C. A. Weiss

ESSEX SOUTH
N. P. Breed
C. L. Curtis
S. E. Golden
J. F. Jordan
B. B. Mansfield
W. G. Phippen
J. R. Shaughnessy

FRANKLIN
F. J. Barnard
W. J. Pelletier
H. G. Stetson

HAMPDEN
Frederic Hagler
T. S. Bacon
W. C. Barnes
J. L. Chereskin
E. C. Dubois
M. F. Gaynor
M. W. Pearson
A. G. Rice

MIDDLESEX EAST
C. R. Baisley
J. H. Blaisdell
Richard Dutton
E. M. Halligan
J. H. Kerrigan
K. L. Maclachlan
R. W. Sheehy

MIDDLESEX NORTH
F. L. Gage
M. L. Alling
A. R. Gardner
G. A. Leahey
E. A. Payne
C. M. Roughan
M. A. Tighe

MIDDLESEX SOUTH
Dwight O'Hara
C. F. Atwood
E. W. Barron
W. B. Bartlett
Harris Bass
E. H. Bigelow
G. F. H. Bowers
E. J. Butler
B. F. Conley
D. F. Cummings
C. H. Dalton
H. F. Day
C. L. Derick
J. E. Dodd
H. Q. Gallupe
H. G. Giddings
H. W. Godfrey
W. G. Grandison
A. D. Guthrie
A. M. Jackson
A. A. Levi
A. N. Makechnie
R. A. McCarty
J. A. McLean
Edward Mellus
J. C. Merriam
C. E. Mongan
J. P. Nelligan
W. D. Reid
Max Ritvo
E. S. A. Robinson
E. F. Ryan
M. J. Schlesinger
W. N. Secord
E. F. Sewall
E. W. Small
H. P. Stevens
R. A. Taylor
R. H. Wells
M. W. White
W. S. Whittemore

NORFOLK
C. J. Kickham
J. D. Adams
W. W. Barker
A. S. Begg
D. N. Blakely
Myrtelle M. Canavan
F. P. Denny
G. L. Doherty
Albert Ehrenfried
D. G. Eldridge
C. B. Faunce, Jr.
Maurice Gerstein
W. A. Griffin
J. B. Hall
H. L. Johnson
C. J. E. Kickham
E. L. Kickham
H. M. Landesman
D. L. Lionberger
D. S. Luce
D. L. Lynch
F. J. Moran
M. W. O'Connell
D. D. Scannell
J. W. Spellman

NORFOLK SOUTH
C. S. Adams
G. V. Higgins
H. A. Robinson

PLYMOUTH
A. W. Carr
P. B. Kelly
P. H. Leavitt
W. H. Pulsifer

SUFFOLK
Reginald Fitz
A. W. Allen
H. L. Blumgart
W. B. Breed
W. J. Brickley
W. E. Browne
C. S. Butler
E. M. Chapman
David Cheever
M. H. Clifford
R. L. DeNormandie
N. W. Faxon
G. B. Fenwick
Channing Frothingham
Joseph Garland
John Homans
Rudolph Jacoby
H. A. Kelly
T. H. Lanman
R. I. Lee
C. C. Lund
G. R. Minot
W. J. Mixter
J. P. Monks
R. N. Nye
F. R. Ober
J. P. O'Hare
L. E. Phaneuf
Helen S. Pittman
W. H. Robey
R. M. Smith
M. C. Sosman
Augustus Thorndike, Jr.
S. N. Vose
Shields Warren
Conrad Wesselhoeft

WORCESTER
J. C. Austin
Gordon Berry
W. P. Bowers
L. R. Bragg
*W. I. Clark
G. A. Dix
E. B. Emerson
G. E. Emery
J. M. Fallon
J. J. Goodwin
E. R. Leib
W. F. Lynch
J. C. McCann
J. W. O'Connor
W. C. Seelye
C. A. Sparrow
G. C. Tully
R. J. Ward
F. H. Washburn
S. B. Woodward

WORCESTER NORTH
B. P. Sweeney
E. A. Adams
C. B. Gay
J. C. Hales

*By invitation.

APPENDIX NO. 2

REPORT OF THE COMMITTEE ON ETHICS AND DISCIPLINE

Since our report to you in June the committee has held four meetings, all of which the president of the Society attended. Eleven new complaints have been received. Eight of these, all minor in character, were satisfactorily adjusted after careful investigation and need not be gone into here.

One fellow, who was convicted in a court of law of a crime and from whom a written request for a hearing has not been received, is recommended for deprivation of fellowship by the Council under Chapter I, Section 8 (*c*), of the by-laws. The report will be presented to you for action by the Committee on Membership.

A complaint was made against a fellow by a patient who had been seriously injured in an automobile accident. The complainant stated that he had received from the fellow a large bill for services rendered to him while he was in a hospital and for appearing in court. The complainant stated that he had refused to pay the fellow's bill as he believed that it was unjust. The complainant further stated that the fellow had attached the award given him by the jury and that he had been put to considerable expense in trying to have the fellow's bill reduced and the attachment removed, without avail. After a long and complicated investigation by the committee we gave the fellow a hearing, at which it was conclusively proved that the bill was unjustified and that there was a serious error in the amount of the bill; we criticized him for attaching the award that was given to the patient. At the hearing the fellow admitted that the bill was wrong. We gave him the opportunity to rectify his error and the injustice that he had done to the patient. He at once instructed his lawyer to make amends. The complaint before us was withdrawn immediately by the complainant. After considerable discussion in the committee, we recommended that the President give the fellow a very severe admonition, and this has been done.

Another hearing was on a complaint from two fellows of the Society against two other fellows because of medical testimony that the latter had given in a lawsuit against the complainants. We gave a hearing to the two fellows against whom the complaint was made, and after extended hearings and much discussion the committee finally voted unanimously to ask them to resign from the Society. Their resignations have been received.

ROBERT L. DENORMANDIE, *Chairman.*

APPENDIX NO. 3

REPORT OF THE COMMITTEE ON MEMBERSHIP

This committee recommends:

1. That the following named seven fellows be allowed to retire under the provisions of Chapter I, Section 5, of the by-laws:

Briggs, J. Emmons, North Dighton
Felch, Carrie I., Boston
Felch, Lewis P., Boston
Godfrey, Joseph W., Swampscott, with remission of dues for 1938 and 1939
Kaan, George W., Sharon
Little, Abby N., Laconia, New Hampshire
May, James V., Watertown

2. That the following named fellow be allowed to resign under the provisions of Chapter I, Section 7, of the by-laws:

Rhoad, Owen W., Windsor, Vermont

3. That the following named retired fellow be recommended for affiliate fellowship in the American Medical Association:

Wilcox, DeWitt G., Newton Centre

4. That the following named fellow be deprived of the privileges of fellowship under the provisions of Chapter I, Section 8 (*c*), of the by-laws:

Vassallo, John E., Malden

5. That the resignations of the following named fellows be accepted under the provisions of Chapter VII, Section 4, of the by-laws:

Donaghy, G. Everett, Cambridge
Marvin, Frank W., West Newton

H. QUIMBY GALLUPE, *Chairman.*

APPENDIX NO. 4

Report of the Committee on Public Health and the Subcommittee on Public Education

The committee has arranged for the continuation of the radio talks, "Green Lights to Health," during the coming year. These broadcasts will be on Wednesdays at 4 p.m. over WAAB. On account of the "World Series" the first talk cannot be given until October 18. The program with titles of addresses and speakers has been completed through December.

A request from a Rotary Club for a talk on the subject of "Socialized Medicine" has been fulfilled.

Francis P. Denny, *Chairman.*

APPENDIX NO. 5

Report of the Committee on Postgraduate Instruction

Since the annual report of the postgraduate extension courses to the Council last June, the committee closed the fiscal year with the government agencies on June 30, 1939. The funds appropriated for postgraduate extension courses by these agencies were $7422.85; the Society in February, 1939, appropriated an additional $1000, which is being used at the present time to help defray clerical, printing and administration expenses. At the end of the calendar year a report of the disposition of this fund will be made to the Council.

In July, 1939, arrangements were made through Dr. Paul J. Jakmauh, state commissioner of public health, to continue the postgraduate extension courses for the current academic year 1939–40. Curriculums have been made out and sent to the respective districts. Ten districts will have the courses this fall, and the remainder later in the year.

The New England Postgraduate Assembly has been organized in co-operation with the medical societies of Maine, New Hampshire, Vermont and Rhode Island. The program has been published in the *New England Journal of Medicine.* An invitation program will be mailed to each registered physician in the sponsoring states this week. The program has been completed and will be given as published, with the exception that Sir Thomas Lewis, of England, has been forced to cancel his appointment due to the current European war. He sends his regrets to the Society. Dr. Lewis A. Conner, of New York City, will fill the place of Sir Thomas on the program.

The committee expresses appreciation and thanks to all the district chairmen who are actively carrying on the organization work in their communities. The time and place of the extension courses will be announced each week in the columns of the *New England Journal of Medicine,* as well as the speakers' names and the titles of the lectures.

Frank R. Ober, *Chairman,*
Leroy E. Parkins, *Secretary.*

APPENDIX NO. 6

Report of the Committee on Industrial Health

The Committee on Industrial Health was appointed April 27, 1939. Immediately after its appointment the committee contacted the Council of Industrial Health of the American Medical Association. The secretary of the Council suggested that our committee make certain contacts in Massachusetts and elsewhere. The following contacts have been made:

1. National Industrial Conference Board
(Conference Board of Physicians in Industry)
2. National Association of Manufacturers
(Committee on Healthful Working Conditions)
3. Air Hygiene Foundation of America, Pittsburgh
4. Harvard School of Public Health
(Department of Industrial Hygiene)
5. Massachusetts Department of Labor and Industries
(Division of Occupational Hygiene)
6. Liberty Mutual, Arrow Mutual and other insurance companies in Massachusetts providing workman's compensation insurance.

The committee was asked by the secretary of the Council to provide information on many phases of industrial medicine and industrial hygiene in Massachusetts, including a list of the physicians doing full-time or part-time industrial work. All questions have been answered, and the list requested has been made out and sent.

The committee expresses to the Secretary its appreciation of his help in obtaining this list of names.

The committee has had several meetings and is working on a program for future work. It is at present preparing a description and a discussion of the physical examination in industry. A committee of lay and medical men in Wisconsin has recently issued such a report, which was developed under state influence. The report is well done and suggests that a similar report might be of value to the members of this society who are practicing industrial medicine.

W. Irving Clark, *Chairman.*

APPENDIX NO. 7

Resolution Presented by Dr. Henry M. Landesman

Whereas, More than half of the states in the Union have adopted prenuptial health laws during the past four years; and

Whereas, There is a national drive being waged against syphilis and gonorrhea by Surgeon-General Parran; and

Whereas, The Legislature in this commonwealth has not been willing to pass prenuptial-serological-blood-test legislation during the past four years; and

Whereas, It has been definitely proved that syphilis and gonorrhea, when discovered, can be uprooted and innocent individuals at least can be protected from contracting the above diseases; and

Whereas, Since a prenatal-serological-blood-test bill was passed by the last Legislature and signed by the Governor, it is advisable to take advantage of this fact and utilize this opportunity even in an educational way by having the Council adopt the following resolution and sponsor its purposes and results; therefore, be it

Resolved, That the Massachusetts Medical Society adopt and sponsor this resolution that all couples about to be married should have a general physical examination or at least a serological blood test for syphilis.

CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

ANTEMORTEM AND POSTMORTEM RECORDS AS USED IN WEEKLY CLINICOPATHOLOGICAL EXERCISES

FOUNDED BY RICHARD C. CABOT, M.D.

TRACY B. MALLORY, M.D., *Editor*

CASE 25441

First Admission. A forty-six-year-old, married Canadian was admitted to the hospital complaining of difficulty in breathing.

Six months before entry he noted the onset of progressively increasing orthopnea, and eventually had to sleep propped up. At the same time he experienced a dragging feeling in his abdomen. Five months before entry he noted swelling of the ankles but did not recall whether they were less swollen in the morning after a night's rest. Throughout this six months' period he experienced great difficulty in breathing on exertion so that two weeks before admission a single step caused him to become breathless. He was able to maintain employment as a solderer during this time simply because of the lack of physical exertion which this work entailed. He was placed on a reducing diet and given thyroid extract, two pills daily, until two weeks before admission when the number was increased to three, but his weight remained about 250 pounds. During his present illness he had been given "green pills" for his heart, of which he took three daily. Because of his steadily progressing symptoms he entered the Out Patient Department for relief and was immediately referred to the hospital. He denied the following symptoms; hemoptysis, chest pain, palpitation and paroxysmal nocturnal dyspnea.

The patient believed that during childhood he had had measles, mumps, pertussis, chickenpox, scarlet fever and possibly diphtheria. He denied ever having had rheumatism, rheumatic fever or kidney trouble but had had frequent sore throats. He had successfully undergone an appendectomy seventeen years previously. Starting ten years before entry he had gradually climbed in four years from about 170 to 250 pounds in weight, at which weight he had remained. He had experienced nocturia two times regularly for the past six years, which had not changed significantly during the six months previous to his admission.

Physical examination revealed a very obese, slightly cyanotic man sitting up, with slightly wheezing respirations. There were a few fine rales heard at both lung bases. The heart sounds were distant, and a slightly split second sound along the left sternal border was heard. The blood pressure was 160 systolic, and 110 diastolic. The abdomen was hugely obese, rather tense, and flat in most of the dependent portions, with a questionable shifting dullness and fluid wave. There was pitting edema of the feet and lower legs.

The temperature, pulse and respirations were normal.

The urine was clear and acid, with a specific gravity of 1.016 to 1.026; there was a trace of albumin, the sediment showed extremely rare white blood cells, no red blood cells, rare granular casts and, on one occasion, many hyaline casts per high-power field. The blood showed a red-cell count of 5,760,000 with 95 per cent hemoglobin, and a white-cell count of 7800 with 64 per cent polymorphonuclears. The stools were guaiac negative. The serum nonprotein nitrogen was 30 mg. per 100 cc., and the serum protein 6.18 gm.; the chlorides were equivalent to 107 cc. of N/10 sodium chloride. A phenolsulfonephthalein test revealed an excretion of 55 per cent in one hour. The vital capacity was 1600 cc. An electrocardiogram showed normal rhythm at the rate of 85, interrupted by ectopic ventricular beats. The PR interval was 0.19 second; there was slight slurring of the QRS complexes, a very slightly inverted T_1, a low T_2, and an upright T_3.

An x-ray film showed a "large, decompensated heart."

The patient was placed on a Karell diet, with digitalis and bed rest. It was noted that on occasions Cheyne-Stokes respirations occurred, during which time he became cyanotic. He improved rapidly with this regime, however; on the fourth hospital day the peripheral edema had disappeared and on the ninth hospital day he was allowed to be up. His vital capacity was 2650 cc. He was discharged on the fifteenth hospital day with a 1200 caloric diet and 1½ gr. of digitalis daily. He had lost from 15 to 20 pounds during his hospital stay. The urine sediment contained no casts when the patient was discharged.

Second Admission (three and a half years later). The patient was followed in the Out Patient Department at regular intervals. He was able to work six days a week and used only two pillows a night for sleep. His weight remained around 204 pounds, and his blood pressure 160 to 180 systolic, 90 to 110 diastolic. At one time he ceased taking digitalis and promptly developed peripheral edema, which was relieved when he again returned to the daily use of the drug. Two weeks before admission the patient caught cold, developed cough and noted an increase in dyspnea and orthopnea and the presence of ankle edema. He complained of

moderate frontal headaches, insomnia and an inability to work.

Physical examination revealed an obese, dyspneic, orthopneic man who appeared older than his years. Cheyne-Stokes respirations were present, and the breath had a uriniferous odor. Examination of the fundi revealed five tortuous vessels with several small hemorrhages. The disks were pink, slightly blurred but without elevation. The neck veins were distended. The heart was enlarged to the left, with the apex in the anterior axillary line. The rhythm was irregular, with frequent extrasystoles. The pulmonary second sound was exaggerated. There were no murmurs. The lungs were clear except for the presence of a few basal rales. The liver was felt five fingerbreadths below the costal margin and was slightly tender. There was no peripheral edema. The left inguinal ring was large and lax.

Laboratory examinations revealed a negative blood Hinton test, a serum nonprotein nitrogen of 37 mg. per 100 cc., a phenolsulfonephthalein excretion of 42 per cent in one hour and a hematocrit of 54. An electrocardiogram showed an inversion of T_1, with a low T_2, a PR interval of 0.18 second, a ventricular rate of 90 and an auricular rate of 90, with normal rhythm; the QRS complexes in Leads 1, 2 and 3 were slightly slurred.

Final Admission (five months later). With restricted activity the patient did fairly well for a few months following the second discharge. However, starting about two months before the present admission he had had to spend most of his time in bed, and two weeks before admission he became bedridden. He had noted a slight weight loss and complained of increasing dyspnea with the slightest exertion, and orthopnea so that he had to sleep sitting straight up. He had experienced no acute infection, cough or sputum, nor had he noted pain in the chest, ankle edema or swelling of the abdomen.

Physical examination revealed a markedly orthopneic, obese man sitting upright in bed and breathing rapidly. The lips were cyanotic. There was slight sacral edema. The heart was much enlarged to the left, and the pulmonic second sound was accentuated. Occasionally the rhythm was regular at the wrist, and then again it was trigeminal or bigeminal. The liver was felt five fingerbreadths below the costal margin and was slightly tender.

The urine was negative except for a ++++ albumin. The blood was normal. Stools were guaiac negative. An electrocardiogram revealed a ventricular rate of 95, with multiple ventricular premature beats. The PR interval was 0.18 second, the QRS duration 0.10 second; T_1, T_2 and T_3 were low, and T_4 slightly high; there was a notched QRS complex, with low voltage, in Leads 1, 2 and 3.

His disease ran a rather hectic course. The temperature ranged from 97°F. on admission to from 99 to 102°F. in a septic crisis until the time of death. The pulse was around 60, with respirations 25 to 30. He developed dullness at the left base and marked pain in the right lower anterior chest, with Cheyne-Stokes respirations. He became markedly cyanotic, was placed in an oxygen tent but after twelve hours of extreme respiratory embarrassment expired on the fifth hospital day.

Differential Diagnosis

Dr. Howard B. Sprague: This story and these physical findings do not fit in very well with our ordinary categories of heart disease. I do not know whether I can even talk myself into a diagnosis.

Let us review some of the evidence. The man was middle-aged and very obese, having gained 80 pounds in a few years, and he went through three periods of congestive failure but survived for four and a half years after the beginning of his cardiac symptoms. His first complaint was that of orthopnea and then of severe dyspnea on exertion, followed by evidence of peripheral failure with the development of liver enlargement and edema.

The physical findings are not very helpful. He obviously had a big heart, confirmed by the x-ray report of a large decompensated heart with no characteristic shape. There were no murmurs. The pulmonary second sound was accentuated, presumable evidence of pulmonary hypertension, but he had none of the other things like gallop rhythm that we might look for in this picture and his blood pressure was borderline (160 systolic, 100 diastolic) when he was first seen. The electrocardiogram does not help very much. He was having cardiac failure with essentially normal rhythm, not auricular fibrillation which would fit in better with some diagnoses than with others. There was only a slight slurring of the QRS complexes, and what changes there were in the T waves might well have been due to digitalis. This first electrocardiogram shows slight inversion of the T waves. In the first lead it looks like a coronary T wave. In the second tracing there is a rather prominent S wave in the first lead, but in the chest lead there is a Q wave of 4 mm., which is normal, and a normal, inverted T wave according to the old technic, essentially the same as the first tracing except that the slight inversion of the T wave in the first lead is less obvious than it was. In the final tracing there is again a slight late inversion of T_1 with low T waves in Leads 2

and 3, but the chest lead is normal and the tracing actually shows less inversion of T_1 than before but a very irritable heart with runs of ventricular premature beats almost like ventricular paroxysmal tachycardia, the thing one observes in terminal toxic conditions. The electrocardiographic evidence, therefore, is inconclusive. It does not hang together in the first and fourth leads as we should like for a diagnosis of coronary occlusion.

He did improve with the ordinary treatment of rest, digitalis and Karell diet and was able to go back to more active work for three and a half years, but he was apparently at the edge of congestive difficulties, because when he stopped taking digitalis the edema recurred and he responded when it was resumed. Because of the story of cold and cough, this second upset seems to have been in relation to a respiratory infection. On the second admission we do have the added evidence that examination of the fundi showed small tortuous vessels with hemorrhages, but the rest of the examination does not help us very much. He again recovered to the point of some activity until the last admission, when he became bedridden two weeks before he came into the hospital. He had no ankle edema or swelling of the abdomen, but marked dyspnea on exertion and orthopnea so that he had to sleep sitting up. At the time of this final admission he was running a temperature and the physical findings would seem to indicate, in addition to some congestive basal rales, that he probably had pulmonary infarction.

In our ordinary groups of hypertension, arteriosclerosis, syphilis and rheumatic fever, where does this fellow fit? He had no evidence of valvular disease, and we can rule out rheumatic heart disease unless we assume some very rare purely myocardial process on a rheumatic basis. There is nothing suggestive of ordinary syphilitic heart disease with involvement of the aortic valve, and he had a negative Hinton test. It may be that some people develop big hearts on the basis of syphilitic myocarditis, but we should like to have more evidence before making that diagnosis. He was forty-six years old. When the trouble started he showed a questionable slight inversion of the T waves in the first lead. Could this represent a coronary occlusion followed by a slowly progressive failure due to the effect of an infarct? There is very little evidence for such a hypothesis. He never had anginal pain, never had an acute attack. It is perhaps of some interest to speculate whether his work as a solderer with lead had anything to do with the development of early arterial change. Or, again, the obesity may have had something to do with it. There is no suggestion that the obesity was due to myxedema. He was made no better and perhaps worse by the doses of thyroid extract.

Then we have finally the question of hypertension. The big left ventricle was the outstanding thing on physical examination, with a blood pressure ranging up to 180 systolic, 110 diastolic, and evidence of changes of a rather high degree in the retinal arteries but without axis deviation in the electrocardiogram. The electrical axis was entirely normal, and he developed a true low-voltage curve only during the terminal stages of the disease, so that is out of line with hypertensive heart disease.

Then we think of other less obvious diagnoses. Is there anything to suggest that he had trouble predominantly in his right heart — pulmonary hypertension? Did that arise from primary disease in the lungs of an arteriosclerotic nature or from multiple pulmonary emboli with small infarcts and a secondary cor pulmonale? His first symptom was orthopnea without marked physical signs. There is no history of chronic cough, and the physical findings point to left-sided rather than right-sided enlargement; furthermore, there is no real right-axis deviation. There is no evidence of pericardial disease that I can make out. It is not the picture of constrictive pericarditis. There is nothing in the background to suggest that out of a clear sky at the age of forty-six he had succumbed to pericardial disease which must have arisen in childhood, because such a condition is probably always associated with valvular lesions. He may have had an active process in his myocardium or endocardium, or both, at the time of death. At least something was present to account for the fever, and I think pulmonary infarction is the most likely explanation. So I cannot see that we can fit this to any of the categories. We may be dealing with unexplained cardiac enlargement, of which we have seen several cases and which we are unable to relate to rheumatic heart disease, syphilis, toxic foci, a localized myocarditis or anything to which so far we have given a name. It is rather out of line in that connection because these patients usually go downhill rapidly and do not come out of their first attacks to succumb later on.

DR. CASTLEMAN: Do these patients have hypertension?

DR. SPRAGUE: No, but I think that I shall have to guess that hypertension is the most likely background for the cardiac enlargement in this case. There may be more coronary disease than I suspect, and if not, the enlargement may be of an unexplained etiologic type.

DR. PAUL D. WHITE: There is one helpful point

in the history that would support Dr. Sprague's final belief that hypertension was an important factor: the eyegrounds showed considerable arteriosclerosis. Moreover, in the outpatient records it was noted that when his heart failure had cleared after the second stay in the hospital his pressure was 240 systolic, 140 diastolic, and at other times 200 systolic, 115 diastolic. When he appeared in the wards with failure, the blood pressure was consistently lower. That is a significant point. Sometimes blood pressure is high in heart failure when there is a large amount of renal congestion with renal insufficiency, but it clears up and drops to normal after the relief of the congestive failure. Sometimes it is the reverse, with the blood pressure dropping toward a "normal level" in heart failure. A blood pressure of 240 systolic, 140 diastolic, was apparently this patient's normal level. I wonder what induced the first failure which came on without coronary symptoms. The story is that of shortness of breath and nocturnal orthopnea, which certainly means left ventricular failure. Whether that was the first manifestation or whether, if we had asked him in a little more detail, he might have admitted discomfort substernally on effort, we cannot say. One can obtain such a history in most patients with coronary disease. Dr. Samuel A. Levine has stated, and I quite agree with him, that the more one gets careful histories in cases of suspected coronary disease the more one finds the story of substernal discomfort that may at first have been called breathlessness by the patient.

Another point of importance in this case is that the late inversion of the T waves in Lead 1 is strongly suggestive of the diagnosis of coronary disease. Inversion of T_1 with left-axis deviation is frequently found in hypertension alone, but that does not appear quite as does this T wave. Here we find a very late T_1 inversion; the later the inversion of T_1 the more significant it is of coronary disease.

Dr. Sprague: It looks much more like that than it does inversion due to digitalis or left-axis deviation.

Dr. White: Yes. It is late and strongly suggests coronary insufficiency which may or may not be associated with angina pectoris. It may be due to unrecognized coronary thrombosis. At any rate it does mean coronary insufficiency, whether or not there are symptoms thereof. Also the more congestive failure there is, the less clear is coronary disease symptomatically. There is an old rule: the more heart failure with coronary disease, the less angina pectoris; the more angina pectoris, the less myocardial failure, at least for the time being. Coronary thrombosis may, however, occur suddenly with marked congestive failure, thus accounting for fever.

Another point that I should like to bring up is that when I saw this patient on one occasion at the end of his second hospital entry, when he was convalescing, I thought that he did have chronic hypertensive and coronary heart disease plus respiratory infection which had precipitated myocardial failure. This diagnosis was based on the presence of a large heart plus a hypertension which had been at times more than it was found to be in the ward and on the coronary type of electrocardiogram, plus the fact that a middle-aged or older man with hypertensive heart disease is likely to have coronary disease. A large heart with congestive failure does not need to produce inversion of the T waves in Lead 1.

The only remaining question concerns the heart failure, which was first due to left ventricular strain and then became a total heart failure. Why should he have recovered from his first failure and been relatively well for two or three years? I expect one answer is that he reduced his weight 50 pounds or more in that interval. Weight reduction is a very important method of treatment of this condition when, as here, there is great obesity. In conclusion, I think Dr. Castleman will find that this patient had hypertensive and coronary heart disease, with heart failure and possibly terminal pulmonary embolism.

A Physician: It strikes me that the initial failure may have been due to thrombosis in a silent area of the heart.

Dr. White: He might certainly have had coronary thrombosis, although the story is not characteristic. Digitalis, which he took in the dose of three pills a day, he continued for a long time — six months. He was a big man and able to take a lot of digitalis. Even so it seems a big dose, if each pill contained 1½ gr. Of course, he had some rest therapy as well as digitalis.

Dr. Castleman: I spoke to this man's family physician who informed me that he was very difficult to treat because he insisted on working. I believe that while he was getting the digitalis he did a little work on the side and did not get the rest he should have had.

A Physician: What are the other causes of hemorrhages in the eyegrounds?

Dr. White: No other causes such as serious renal disease or cerebral or ophthalmic lesions were apparent in this case. Hypertension was by far the most obvious cause.

Clinical Diagnoses

Essential hypertension.

Hypertensive and arteriosclerotic coronary heart disease, with congestive failure.

Pulmonary infarct.
? Bronchopneumonia.

Dr. Howard B. Sprague's Diagnoses

Hypertensive heart disease.
Coronary sclerosis.
Terminal pulmonary infarction.

Pathological Diagnoses

Cardiac hypertrophy, hypertensive type.
Pulmonary infarction, multiple.
Arteriosclerosis, marked, coronary, aortic and cerebral.
Pulmonary congestion.
Infarcts of kidney and spleen, old.
Thrombosis of popliteal vein, right.

Pathological Discussion

Dr. Castleman: The autopsy showed a very large heart, weighing 780 gm. There was hypertrophy of both the right and left ventricles, the right ventricle measuring 8 mm., which is a little more than twice normal. Since there were no valvular lesions one certainly would consider it a true hypertensive heart. The coronaries were markedly sclerotic and calcified. In several places only pinpoint lumens could be seen, but there was no evidence of thrombosis or myocardial infarction. Microscopically only the slightest amount of fibrosis was found throughout the myocardium, such as is almost always seen with coronary disease. He showed all the signs of heart failure. There were 500 cc. of fluid in the right pleural cavity, 100 cc. on the left. The lungs were markedly congested. In addition, there were about a dozen infarcts throughout all lobes of the right lung and two in the left lower lobe. Some of the infarcts were fairly old and probably account somewhat for the hypertrophy of the right heart. I am sure he had some on his previous admission. The source of the emboli was the right popliteal vein, where a large thrombus was found.

Dr. White: Was there any indication clinically that he had phlebitis?

Dr. Castleman: No.

He also had evidence of embolism in the systemic circulation. There was an old infarct in one kidney and another in the spleen so that we may assume that during some of the hospital admissions he had had a mural thrombus in the left auricular appendage which had broken off. We found no evidence of it, however, at autopsy.

Dr. White: He may have started the illness with pulmonary embolism causing dyspnea, and following that congestive heart failure.

Dr. Castleman: I think it is more likely that failure began as a consequence of his coronary disease.

Dr. White: He might have had the combination plus hypertension.

Dr. Castleman: He had severe arteriosclerosis throughout the body, especially marked in the brain, but we were unable to find any softening.

Dr. Sprague: Do you know whether he had a bad family history or whether lead had anything to do with the picture?

Dr. Castleman: I believe he did have a family history of hypertension.

A Physician: Any nephrosclerosis?

Dr. Castleman: Very slight. He certainly did not die of kidney failure.

Dr. White: He really represents hypertensive heart disease so far as the myocardium is concerned except that the extensive coronary disease added its quota of insufficiency to precipitate myocardial failure. I think he would have eventually shown congestive failure even without the coronary disease. The hypertensive effect was on both ventricles, first on the left and then, secondarily, on the right. Finally both ventricles failed.

Dr. Castleman: A postmortem film shows fluid and bilateral infarcts.

Dr. White: If anything, we are overdiagnosing pulmonary infarcts now because we have found so many pulmonary infarcts complicating congestive failure. They are almost always multiple rather than single.

CASE 25442

Presentation of Case

A fifty-three-year-old carpenter was admitted to the hospital complaining of shortness of breath for three months.

The patient was apparently well until about one year before entry when he noted a constant "tiredness" on awakening mornings; this forced him to sit and rest on the side of the bed before getting up. About six months before entry the patient contracted a "cold" characterized by general malaise, poor appetite and further "tired" feelings. There was no known fever. About two weeks later he began to have dyspnea on slight exertion. He spent two weeks in an outside hospital and improved with digitalis therapy. After discharge he continued to take digitalis, three pills a day, and was followed by his doctor for six weeks, at the end of which time he discontinued the medications because he saw "no benefit from the medicine." He continued to work as a carpenter until one month before entry when he again noticed increasing dyspnea, early orthopnea and insomnia and experienced regular attacks of

asthmatic gasping breathing at about three o'clock every morning. Two weeks before entry ankle edema had appeared. All these symptoms increased until ten days before admission when he became dyspneic even on sitting quietly. He was then given "quinidine," six tablets per day, for the irregular heart, but this apparently caused nausea, vomiting and malaise, with an associated increase in edema after a week's use of the drug.

He had had "scarlet fever" at the age of seven. Otherwise the family, marital and past histories were noncontributory.

Physical examination revealed a well-developed and poorly nourished man in definite respiratory distress, with Cheyne-Stokes breathing. The arteries of the fundi were thin and showed marked nicking. The neck veins were distended. The chest was barrel shaped. The heart was markedly enlarged to the left, and the rate was regular with occasional extrasystoles. There were continuous blowing systolic and diastolic murmurs at the apex which replaced the heart sounds. A distinctly rough systolic murmur at the aortic area was transmitted to the neck but was unaccompanied by a thrill. The aortic second sound was markedly diminished and was less than the pulmonic second sound. The blood pressure was 90 systolic, 60 diastolic. The lower half of both lung fields posteriorly and laterally were dull to percussion, and the breath and voice sounds were decreased to absent, with medium to fine moist rales. The liver edge was tender and was palpated two and a half fingerbreadths below the costal margin. There was pitting edema of the feet and lower legs. The remainder of the examination was negative.

The temperature was 97.6°F., the pulse 80, and the respirations 20.

Examination of the blood revealed a red-cell count of 4,600,000 with 85 per cent hemoglobin, and a white-cell count of 10,700 with 78 per cent polymorphonuclears. The blood serum nonprotein nitrogen was 66 mg. per 100 cc. An electrocardiogram showed a ventricular and auricular rate of 80 per minute, with ventricular premature beats, a PR interval of 0.18 second and a QRS duration of 0.13 second; the QRS complex was slurred, and there was a right bundle-branch block. A blood Hinton test was negative. X-ray examination of the chest revealed a heart markedly enlarged to the left with an elongated aorta and prominent aortic knob without evidence of dilatation. The hilar vessels were increased in size. There was a small amount of fluid in the left pleural cavity.

The patient on admission was in obvious distress with orthopnea, Cheyne-Stokes respirations, an enlarged liver and peripheral edema. He was placed on a "cardiac regime," including digitalis, Salyrgan, aminophyllin, morphine and complete bed rest. He improved quickly but not dramatically and was allowed out of bed on the fourteenth to eighteenth hospital days. He tired easily, and began to show Cheyne-Stokes respirations again; he was then put back on complete bed rest and digitalis. On the twenty-ninth hospital day an electrocardiogram showed persistent right bundle-branch block with ventricular premature beats. He continued to become slowly but steadily more dyspneic. During the fifth week he became worse, with increased dyspnea and pains in the low back and in the "bones of the legs." The temperature rose to 101°F., the pulse to 100, and the respirations to 24. He developed a marked systolic thrill and harsh murmur over the aortic area, with dullness and increased breath sounds and fremitus in the right chest anteriorly. An electrocardiogram showed persistent bundle-branch block with numerous premature beats arising in both auricles and ventricles. Digitalis was discontinued. On the forty-third day he went into circulatory collapse, developing cold, pulseless extremities and cyanosis, and died.

Differential Diagnosis

Dr. C. Edward Leach: The description indicates a present illness relatively free of complicating factors. It seems one primarily of cardiac insufficiency, progressive in degree, beginning with left ventricular failure as evidenced by dyspnea, at first associated with exertion, and relieved by rest and digitalis in the hospital. However, a short time later the same symptoms, though of greater severity, recurred, perhaps returning more rapidly because he had discontinued digitalis. Subsequently he developed frequent attacks of probable cardiac asthma with increasing orthopnea and dyspnea, and three months before entry ankle edema indicated right ventricular failure.

The physical examination showed practically all the signs of advanced heart failure, with evidence of pulmonary congestion as well as congestion of the systemic circulation. The heart itself revealed marked enlargement, chiefly to the left. The rough systolic murmur described in the aortic area and transmitted to the neck, together with the blood pressure and diminished aortic second sound, makes a fairly characteristic picture of aortic stenosis. The apical murmurs were not quite so clear cut. The diastolic murmur at the apex, which was described as blowing in character, is confusing. An aortic diastolic murmur may be heard at the apex and have a blowing quality. I have never heard a mitral diastolic murmur that was not rumbling. No basal diastolic murmur is described, and I must therefore assume that this was not a transmitted murmur. At the

apex even functional diastolic murmurs have a rumbling quality, and I wonder whether this description of the apical signs might err a bit in either the timing or quality of the murmurs. It does not suggest to me organic mitral-valve disease, and it is more likely that the murmurs at the apex were functional, perhaps associated with dilatation of the left ventricle.

At the time of entry to the hospital there was no evidence of complicating factors other than heart disease and heart failure. The temperature was normal. The blood counts at that time, the white count particularly, were not remarkable. The nonprotein nitrogen of 66 mg. per 100 cc. might go with a fairly severe congestive failure, and it is unnecessary to introduce primary renal disease to explain it. It seems to me that aortic stenosis was the important cardiac lesion. The intensity of signs and the age of the patient favor the calcareous type. There is a note that he had had scarlet fever at the age of seven, which introduces a possible etiologic factor for pre-existing valvular disease. This may have been rheumatic fever. Many of the cases of calcareous aortic disease that we see have a history suggesting rheumatic fever in the past, but often this is lacking. The most significant thing in the electrocardiogram is the evidence of right bundle-branch block. I think this probably indicates coronary disease in addition to the aortic valvular disease, since coronary disease is by far the most frequent cause of bundle-branch block and it is not usually found in valvular heart disease.

His early hospital course, during which he apparently improved under treatment, was presumably uncomplicated. He was apparently doing well and was allowed up for a few days. Then he became worse and at that time there were probably some complicating factors in his illness. According to the record he became slowly but steadily more dyspneic, and during the fifth week of his stay he had a recurrence of increasing failure. The temperature rose to 101°F., the pulse to 100, and the respirations to 24. Associated with this he apparently had a change in the character of the murmur at the aortic area, and a systolic thrill was felt at that time. He also complained of pains in the lower back and in the bones of the legs. There is no note as to how long this temperature elevation persisted or whether it was present up to the end of the illness, but in conjunction with the change in the murmur, one is forced to think of a bacterial endocarditis superimposed on the valvular disease. However, that would be a rather unlikely occurrence in a calcareous type of valvular involvement. There is an additional note that he had evidence of pulmonary consolidation at that time, a better explanation of the fever. He went rather rapidly downhill up to the time of the terminal episode. The increasing number of premature beats indicates a greater irritability of the heart associated with increasing heart disease and heart failure or overdigitalization. Digitalis was stopped, probably because of the latter possibility.

His terminal episode was one of circulatory collapse and as described here gives little clue to the responsible factor. Coronary occlusion, pulmonary infarction, cerebral accident or even ventricular fibrillation would fit the description that is given. However, no particular mention of pain is made, which we might expect in coronary thrombosis, and no obvious signs of cerebral accident are described. With the pulmonary signs previously noted at the onset of fever it seems likely that pulmonary infarction is a reasonable explanation of the terminal failure and death. A great many patients with marked aortic stenosis die suddenly, and this has been explained by the patient's inability to increase cardiac output, important because of the stenotic orifice that limits the amount of blood ejected. Similarly a sudden strain on the heart by further lowering the output might be incompatible with life. It seems reasonable to me that he had in the last few weeks several pulmonary infarcts and that the terminal episode represented sudden death due to changes in the cardiac output associated with additional pulmonary infarction. I do not see how we can tell whether he had pre-existing rheumatic heart disease, since the description of physical signs does not allow a positive decision regarding mitral disease, and his past history is essentially negative. I think it would be very unlikely that the aortic stenosis was entirely rheumatic since he had had no symptoms until six months or a year before his death. I shall leave open the question of pre-existing rheumatic heart disease and advance for my diagnoses: calcareous aortic stenosis, cardiac failure, coronary arteriosclerosis and multiple pulmonary infarcts.

DR. EDWARD F. BLAND: This man was quite a problem. He was obviously very ill. We called up his doctor to find out about the medicine he had been taking. We were interested in the statement about quinidine, which he had been given outside because his heart had been irregular. It apparently helped the irregularity, but the patient got worse. Digitalis had been tried a short while before, but given up. When he arrived at the hospital he was in severe congestive failure. The physical signs were interpreted at that time as indicating both aortic stenosis and regurgitation. In addition to the basal murmurs he had a moderately loud mitral systolic and loud apical diastolic rumble. We thought the prog-

nosis was poor and that he would not survive the episode. The Cheyne-Stokes respiration was even more troublesome than the orthopnea. He was given vigorous digitalis and diuretic therapy but ultimately failed and died.

Dr. Paul D. White: I think Dr. Leach is quite justified in believing that the electrocardiographic finding of bundle-branch block suggested coronary disease. We have, however, seen a few instances of calcareous aortic stenosis where the lesion at the base of the aortic valve was very close to where the bundle of His and its branches come through, and impinged on the bundle giving rise to heart block without much of any coronary disease. I believe Dr. Leach is correct in assuming that there was no bacterial endocarditis. It was noted that there developed a thrill. Do you remember it, Dr. Bland?

Dr. Bland: There was a very well-defined aortic systolic thrill.

Dr. White: It is rare for calcareous aortic stenosis to be complicated by bacterial endocarditis.

Dr. Benjamin Castleman: Unless it is bicuspid. I have seen a few such cases in which there was a subacute bacterial endocarditis.

Dr. Francis M. Rackemann: One note impresses me. This man had a barrel-shaped chest. The interesting question is whether such a chest can develop relatively suddenly as the result of respiratory disease or whether it in itself indicates long-standing disease of the lungs. In this case, the shape of the chest is well shown by the x-ray film, which demonstrates the very marked bulge of the lower ribs and the flat diaphragm. On the chances, this barrel-shaped chest indicates that the trouble had been of considerable duration.

According to the history, the onset of symptoms in this case was at the age of fifty-two when the man was apparently in good general health. This onset was mild, and it was six months later, when he caught a new cold, that more severe symptoms first appeared.

On several grounds, therefore, it seems proper to assume that the beginning of the heart trouble was some time before the onset of his infection and that one cannot blame the infection for the basic cause of the heart trouble. I should like to ask whether it is not entirely proper to suspect that this man had something wrong with his heart for many years before the apparent onset of his disease.

There is one other small point. Whenever I read the words "asthmatic gasping," I perk up a little and think of some process other than heart disease. On the other hand, it is easy to recognize that "asthmatic gasping" like "asthmatic wheezy bronchitis" can occur under a wide variety of conditions and that both may occur quite commonly in cases of this kind.

Dr. White: In answering Dr. Rackemann I should say that we all agree that this heart disease was of long standing. The calcareous change, even though it was calcareous change without fundamental preceding rheumatic valvular disease, was doubtless a good many years in developing; if there was a rheumatic valvular lesion first, the heart disease dates back probably forty years. This man's barrel chest probably did not arise in a month from his cardiac asthma; I do not know how long it takes to develop a barrel chest. Do you, Dr. Sprague?

Dr. Howard B. Sprague: No.

Clinical Diagnoses

Rheumatic and arteriosclerotic heart disease with mitral and aortic stenosis and regurgitation.
Congestive failure.
? Pulmonary infarct.

Dr. Leach's Diagnoses

Calcareous aortic stenosis.
Cardiac failure.
Coronary arteriosclerosis.
Pulmonary infarcts.

Anatomical Diagnoses

Aortic stenosis, calcareous.
Cardiac hypertrophy, hypertensive type.
Endocarditis, chronic rheumatic, mitral and aortic, with stenosis.
Pericarditis, chronic fibrous, adhesive, localized.
Pulmonary edema.
Chronic passive congestion of the liver.
Thrombosis, perivesical veins.

Pathological Discussion

Dr. Castleman: This man had a very large heart, weighing 800 gm., the enlargement being due to marked hypertrophy of the left ventricle produced by a severe degree of calcific aortic stenosis. The valve was very rigid and certainly must have been both stenotic and insufficient. The mitral valve was also involved, showing slight but unquestionable rheumatic changes. There was slight shortening and thickening of the chordae tendineae but without any appreciable stenosis. There were also pericardial adhesions, which are consistent with a rheumatic story. The liver showed marked congestion, and the lungs a large amount of edema and congestion. There was no infection or infarction in the lungs. The coronary arteries showed very slight atheromatous changes and could be considered perfectly normal for his age.

Dr. Comeau: Did the calcification extend down far?

Dr. Castleman: No; it was limited to the sinuses of Valsalva.

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SIGMUND FREUD'S CONTRIBUTIONS TO MEDICINE

Following Sigmund Freud's death it is timely to comment on his contributions to medicine, for they have had universal interest both to the profession and to the general public. It was Freud's psychoanalytic writings which have excited the greatest interest, whereas his earlier work in the fields of clinical and comparative neurology is far less known and is infrequently mentioned. In fact, in Freud's collected works, there is no reference to these special contributions, and it is only in his autobiography that Freud briefly described his investigations previous to his notable contributions to psychology, psychiatry and psychoanalysis.

When a young man, Freud worked under Brücke and Meynert, first in comparative neurology and then in clinical neurology, human cerebral anatomy and neuropathology. It was in July, 1884, that he wrote a short monograph on cocaine, being the first to note its properties as a local anesthetic; in this monograph he prophesied that further uses for the alkaloid would be found. In 1885, on the basis of his histological and clinical publications, he was appointed lecturer on neuropathology at the University of Vienna. In 1897, he contributed the section on infantile cerebral palsies to Nothnagel's *Specielle Pathologie und Therapie*. His most important contributions during this period are the monographs on aphasia, cerebral diplegia and infantile cerebral injuries, work of a high order of originality.

Freud's interest in psychological medicine was stimulated by his work with Charcot in 1885 at the Salpetrière, where he was impressed with the latter's investigations on hysteria and on the effects of hypnotic suggestion. Later he translated Charcot's lectures on nervous diseases, and also Bernheim's volume on suggestive therapeutics. On his return to Vienna, he soon abandoned the treatment of organic nervous diseases, which he thought at that time offered little of promise, and turned to the field of neurotic disorders.

Freud's earliest works on hysteria date from about the year 1886, and the first fundamental contribution to psychoanalysis, written in collaboration with Breuer and entitled *"Ueber den psychischen Mechanismus hysterischer Phänomene"* ("Psychic Mechanisms of Hysterical Phenomena"), appeared in 1893. At first the therapy of choice was hypnotic suggestion; later the significance of the emotional life of hysterical patients was discovered, and this led to a therapeutic aim without the use of hypnosis, termed "catharsis." Then followed the transition from catharsis to psychoanalysis, with its special and complicated technic based on free associations and the investigation of dream processes.

From then on, Freud was a very prolific writer on the general subject of the mechanism and psychotherapy of the psychoneuroses. These investigations gradually led to his conceptions of the impor-

tant part played by unconscious mental processes in the neurotic disorders, and as a result of these discoveries, he began to note the prominent role played by both the sexual and the ego instincts in the personality of both neurotic and normal individuals. These inquiries led, in 1900, to the publication of his monumental volume on the interpretation of dreams. In this book, he demonstrated for the first time the value of understanding dream material and the processes of dream formation for a comprehension of the unconscious setting of psychic disorders. He showed that the real meaning of the dream could not be determined from the dream as remembered, which he termed the manifest content and which was distorted and expressed in symbolic form, but only through the process of free association which led to the web of dream thoughts, that is, the latent content of the dream. It was these dream thoughts which not only illuminated the dream and showed that the fundamental trend of the dream was that of a wish fulfillment but, at the same time, explained through their analysis the neurotic symptoms. It was years later that Freud revised in part his original theory of dreams, with particular reference to the anxiety problem, though keeping the fundamental theory intact.

As time went on, the technic of analysis became more developed, and subsequently Freud published five minutely detailed case histories to illustrate the technical methods utilized in the interpretation and therapy of hysteria, obsessional neuroses and paranoia. In one of these case histories, "*Bruchstück einer Hysterie-Analyse*" ("Fragment of an Analysis of a Case of Hysteria"), published in 1905, he discussed in detail the unconscious motives of neurotic illness and also the important phenomenon of "transference," the latter forming the basis of all psychotherapeutic methods although worked through only in analysis.

The extensive contributions of Freud to medicine have comprised a multiplicity of subjects, such as fundamental conceptions on the psychology of sex, the problem of anxiety, the meaning of slips of the tongue, investigations on the structure and functions of the mental apparatus, dynamic concepts of the personality, the psychology of instinctive drives in the psychoneuroses, the problem of repression, and the purely technical aspects of psychoanalysis.

Freud's work on the structure and functions of the mind; published in 1923 and translated into English under the title of *The Ego and the Id*, has had a great influence on contemporary descriptive and interpretative psychiatry, particularly the concepts of ego, id and superego, and on the clinical observation of what is termed a "negative therapeutic reaction," that is, resistance to recovery from a neurosis produced by an unconscious sense of guilt.

Indeed, as Freud's work of half a century is reviewed as a whole, it becomes apparent that psychoanalysis, which began solely as a specific therapeutic method, gradually evolved into a science of unconscious mental processes, a science necessary for the understanding of normal and neurotic reactions and an essential part of the development of modern psychiatry.

THE NATIONAL CANCER INSTITUTE

THE interest of Massachusetts in the rapidly developing National Cancer Program is particularly keen in view of the fact that this state was the first to recognize cancer as a public-health problem. The late Drs. G. H. Bigelow and R. B. Greenough and the present director of the Division of Cancer of the Massachusetts Department of Public Health, Dr. H. L. Lombard, organized an attack on the disease that, aided by medical men and other public-spirited citizens, has led to a better control of cancer than any other state has yet developed, as judged by that ultimate grim standard, the death rate from the disease. The success of this pioneer work in Massachusetts has had no small influence in recognition of the problem of cancer control as a feasible subject for national public-health effort. We can also have pride in the fact that our congresswoman from Lowell, Mrs. Edith Nourse Rogers, was an important factor in the passage of the National Cancer Institute Act.

The new National Cancer Institute, at Bethesda, Maryland, a part of the National Institute of Health, affords a splendid opportunity for continu-

ing and expanding the excellent work that the United States Public Health Service has been carrying on in this field. Unfortunately, in centralizing the anti-cancer forces of the Service, Boston will be deprived of one of its most important groups of cancer investigators. This unit of the United States Public Health Service, which has developed under the lead of Dr. J. W. Scherechewsky and Dr. F. C. Turner, has been carrying on sound and careful investigations for years. Of special importance, the group, in collaboration with Prof. L. F. Fieser, of the Department of Organic Chemistry, Harvard University, has made outstanding contributions to our knowledge of carcinogenic hydrocarbons. In spite of this serious local loss, our hospitals, medical schools and doctors will close ranks and carry on, with high hopes for the work our friends will do in their new quarters.

It should be the pride of every doctor in the State to do his part in cancer education and cancer therapy, for the backbone of the Massachusetts program is the co-operation of the medical profession. Continued progress and increased prestige for this program give further emphasis to the value of community efforts toward better health when guided and controlled by medical men.

MASSACHUSETTS MEDICAL SOCIETY

SECTION OF OBSTETRICS AND GYNECOLOGY*

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330 Dartmouth Street
Boston

SEPTIC ABORTION

Mrs. V. L. C., a twenty-six-year-old para II, who was about fourteen weeks pregnant, was sent into the hospital by her private physician on June 28, 1937. The previous day he had attempted to empty the uterus because of active bleeding due to spontaneous abortion. The bleeding was so great that he packed the uterus, having succeeded in removing none of the products of conception.

The family history was negative. The patient had had scarlet fever as a child, and her tonsils had been removed. Catamenia began at thirteen, were regular with a twenty-eight-day cycle and lasted five days. Her last period had begun the middle of March. Her previous pregnancy had been normal throughout and had terminated normally in July, 1936.

Physical examination on entrance showed a well-developed and nourished young woman. The heart was not enlarged; there were no murmurs. The lungs were clear and resonant; there were no rales. The temperature and pulse were normal. The uterus was enlarged consistent with her dates and was palpable above the symphysis. Vaginal examination showed the cervix filled with gauze.

On June 29, the day following entrance, the pack was removed. She began to bleed very freely. The uterus was explored, and the amniotic sac was broken with the escape of a large amount of fluid. The fetus except for the head was removed, together with a large amount of placental tissue. The uterus was packed with an iodine strip, not because of bleeding but because it was appreciated that the uterus was not empty and that it was necessary to stimulate uterine contractions. This was removed the following day. The temperature on July 1 and 2 ranged from 98.6 to 102°F. There was no further bleeding. The fetal head was passed spontaneously, but remnants of placental tissue were still retained. The temperature on July 3 ranged between 99 and 100°F. On July 4, following a chill, the temperature rose to 104°F., and the pulse to 124. The following day the temperature gradually came down to 99°F., but the pulse remained elevated from 100 to 120. On July 6 the temperature was normal, but flowing increased.

On July 8 she bled rather freely for about an hour; she also had a slight chill with the temperature rising to 103°F., and the pulse to 130. Because of continued bleeding and in spite of the chill, it was considered necessary to invade the uterus in an attempt to remove the adherent placental tissue which was causing the hemorrhage. The uterus was explored manually and a large amount of adherent placental tissue was removed. The uterus was again packed with an iodine strip, which was removed later in the day. On July 10 the temperature was normal, and the pulse about 100; there was no more flowing. From then on the temperature remained constantly at a normal level and the pulse gradually came down to 80. She was discharged on July 22.

The following blood work was done: June 29, hemoglobin 92 per cent, red-cell count 4,500,000, white-cell count 7700; July 4, white-cell count 8750; July 6, hemoglobin 57 per cent, red-cell count 2,950,000; July 7, hemoglobin 52 per cent, red-

*A series of selected case histories by members of the section will be published weekly. Comments and questions by subscribers are solicited and will be discussed by members of the section.

cell count 2,830,000; July 9, hemoglobin 40 per cent, red-cell count 2,300,000, white-cell count 8600; July 12, hemoglobin 39 per cent, red-cell count 2,300,000; July 14, hemoglobin 43 per cent, red-cell count 2,350,000; July 16, hemoglobin 46 per cent, red-cell count 2,300,000; July 19, hemoglobin 59 per cent, red-cell count 3,500,000; July 22, hemoglobin 69 per cent, red-cell count 3,400,000, white-cell count 8850.

A blood culture taken on July 4 showed no growth. A culture from the vagina on July 6 showed staphylococci, and a culture from the uterus on July 8 showed anaerobic staphylococci and anaerobic gram-negative bacilli. On June 29 the pathologist reported "placental tissue and fetus," and on July 8 "placental tissue, necrosis, masses of bacteria."

Comment. This case illustrates the unhappy course of some spontaneous abortions that occur between the twelfth and fourteenth weeks of pregnancy. A great deal of bleeding sometimes occurs before the cervix is open sufficiently to remove the fetus and the placenta. As in this case, instrumental dilatation results in such profuse hemorrhage that the uterus cannot be emptied and packing is the only safe procedure. Packing of the cervix in cases of bleeding in spontaneous abortion at this stage of pregnancy is done for the purpose of controlling hemorrhage and of softening the cervix, with the hope that when the pack is removed the uterus will empty itself without further complication. This case illustrates the fact that such a result does not always follow, since the uterus had to be packed once more after a good part of the products had been removed manually. In spite of the septic temperature, conservatism was followed. It was known that the uterus was not empty, but until hemorrhage made intrauterine manipulation necessary the uterus was left alone. The third operation was carried out with extreme care, the fingers alone being used, so that the possibility of spreading the infection was reduced to a minimum. This emphasizes the great need of following the general principle that hemorrhage is the only indication for entering an infected uterus.

The question of transfusion when the hemoglobin had reached 40 per cent and the red-cell count 2,300,000 was entertained, but since there was no more hemorrhage, it was believed that iron medication, diet, sunlight and fresh air would suffice.

MEDICAL POSTGRADUATE EXTENSION COURSES

The following sessions of the Medical Postgraduate Extension Courses have been arranged for the week beginning November 6:

BARNSTABLE

Sunday, November 12, at 4:00 p.m., at the Cape Cod Hospital, Hyannis. Gonorrhea in the Female. Instructor: Oscar F. Cox, Jr. Donald E. Higgins, *Chairman.*

BRISTOL NORTH

Thursday, November 9, at 4:00 p.m., at the Morton Hospital, Taunton. Indications for Cesarean Section. Instructor: Judson A. Smith. Lester E. Butler, *Chairman.*

BRISTOL SOUTH (New Bedford Section)

Friday, November 10, at 4:00 p.m., at St. Luke's Hospital, New Bedford. Pneumonia. Instructor: Charles A. Janeway. Robert H. Goodwin, *Chairman.*

ESSEX NORTH

Friday, November 10, at 4:30 p.m., at the Lawrence General Hospital, Lawrence. Cardiovascular Disease: Eleven important questions about heart disease and their answers. Instructor: Edward F. Bland. John Parr, *Chairman.*

ESSEX SOUTH

Tuesday, November 7, at 4:00 p.m., in the Conference Room of the Salem Hospital, Salem. Gonorrhea in the Female. Instructor: P. N. Papas. J. Robert Shaughnessy, *Chairman.*

MIDDLESEX EAST

Tuesday, November 7, at 4:00 p.m., at the Melrose Hospital, Melrose. Convulsions in Infants and Children — Etiology and Treatment. Instructor: Charles F. McKhann. Walter H. Flanders, *Chairman.*

MIDDLESEX NORTH

Friday, November 10, at 4:45 p.m., at St. John's Hospital, Lowell. Common Problems of Neurology: Indications for lumbar puncture. Instructor: T. J. C. von Storch. William S. Lawler, *Chairman.*

WORCESTER (Milford Section)

Tuesday, November 7, at 8:30 p.m., in the Nurses' Home of the Milford Hospital, Milford. Syphilis in Pregnancy and the Offspring. Instructor: William P. Boardman. Joseph Ashkins, *Chairman.*

WORCESTER (Worcester Section)

Friday, November 10, at 8:00 p.m., in the Staff Room of the Worcester City Hospital, Worcester. Head and Spine Injuries. Instructor: Donald Munro. George C. Tully, *Chairman.*

WORCESTER NORTH

Friday, November 10, at 4:30 p.m., in the Nurses' Home of the Burbank Hospital, Fitchburg. Common Laboratory Procedures in Pediatrics and Their Interpretation. Instructor: John A. V. Davies. George P. Keaveny, *Chairman.*

DEATHS

CHESLEY — ALFRED E. CHESLEY, M.D., of Lawrence, died recently. He was in his sixty-fourth year.

Born in North Andover, he attended Dartmouth College and received his degree from New York University College of Medicine in 1904. For thirty years he had been a member of the senior medical staff of the Lawrence General Hospital. He was a member of the Massachusetts

Medical Society, the New England Otological and Laryngological Society, and the Lawrence and Essex County medical societies. Dr. Chesley was also a fellow of the American Medical Association.

His widow, a son and a daughter survive him.

MUNRO — WALTER L. MUNRO, M.D., of Providence, Rhode Island, died October 23. He was in his eighty-third year.

Dr. Munro received his degree from Harvard Medical School in 1885, and practiced in Meriden, Connecticut, before going to Providence. He was consulting surgeon for the principal hospitals of Providence and Pawtucket and was a retired fellow of the Massachusetts Medical Society. He also held fellowships in the American Medical Association and the American College of Surgeons.

A sister, a daughter, Dr. Rose C. Munro, a son and a nephew survive him.

SPARHAWK — CLEMENT W. SPARHAWK, M.D., of Salem, died October 22. He was in his eighty-sixth year.

He was born at Para, Brazil, but received his education in Boston and attended Harvard University. In 1884 he received his degree from the Harvard Medical School and served internships at the Carney and Boston City hospitals.

Dr. Sparhawk first opened his office in West Roxbury. Later he practiced in Plymouth and from there moved to Danvers. He was a member of the Massachusetts Medical Society and the American Medical Association.

His widow, a brother and three nieces survive him.

MISCELLANY

RÉSUMÉ OF COMMUNICABLE DISEASES IN MASSACHUSETTS FOR SEPTEMBER, 1939

DISEASES	SEPTEMBER 1939	SEPTEMBER 1938	FIVE-YEAR AVERAGE*
Anterior poliomyelitis	20	4	139
Chickenpox	87	82	85
Diphtheria	16	8	19
Dog bite	925	819	829
Dysentery, bacillary	56	29	18
German measles	20	18	27
Gonorrhea	419	529	543
Lobar pneumonia	82	120	114
Measles	78	138	76
Meningococcus meningitis	2	5	4
Mumps	57	144	143
Paratyphoid B fever	6	16	9
Scarlet fever	99	139	197
Syphilis	335	516	431
Tuberculosis, pulmonary	215	232	248
Tuberculosis, other forms	24	35	28
Typhoid fever	9	2	16
Undulant fever	1	1	2
Whooping cough	401	375	447

*Based on figures for preceding five years.

RARE DISEASES

Actinomycosis was reported from: Everett, 1; Revere, 1; total, 2.

Anterior poliomyelitis was reported from: Amherst, 1; Boston, 4; Dartmouth, 1; Fall River, 1; Franklin, 1; Malden, 1; Melrose, 1; New Bedford, 1; Newton, 2; Quincy, 2; Revere, 1; Waltham, 1; Watertown, 1; Wellesley, 1; West Brookfield, 1; total, 20.

Diphtheria was reported from: Boston, 1; Brookfield, 1; Cambridge, 3; Fall River, 3; Lawrence, 2; Merrimac, 1; Methuen, 1; Salem, 1; Worcester, 3; total, 16.

Dysentery, bacillary, was reported from: Boston, 1; Danvers, 2; Lowell, 2; Revere, 1; Wareham, 1; Worcester, 3; Wrentham, 46; total, 56.

Infectious encephalitis was reported from: Malden, 1; total, 1.

Malaria was reported from: Chelsea, 1; Foxboro, 2 (therapeutic); total, 3.

Meningococcus meningitis was reported from: Lawrence, 1; Lowell, 1; total, 2.

Paratyphoid B fever was reported from: Boston, 1; Brookline, 1; Chelsea, 1; Fall River, 1; Greenfield, 1; Newton, 1; total, 6.

Pellagra was reported from: Boston, 1; Westfield, 1; total, 2.

Septic sore throat was reported from: Boston, 2; Fall River, 1; total, 3.

Tetanus was reported from: Longmeadow, 1; Milford, 1; total, 2.

Trachoma was reported from: Boston, 1; Lynn, 1; total, 2.

Tularemia was reported from: Boston, 1; total, 1.

Typhoid fever was reported from: Boston, 1; Douglas, 1; Fitchburg, 2; Haverhill, 1; Ipswich, 1; Lawrence, 1; New Bedford, 1; Springfield, 1; total, 9.

Undulant fever was reported from: Ware, 1; total, 1.

Scarlet fever and typhoid fever had their lowest reported September incidence.

Lobar pneumonia was reported at its lowest level since 1933.

The reported incidence of anterior poliomyelitis and meningococcus meningitis was within normal limits.

Bacillary dysentery was reported at a higher level than usual.

Diphtheria, paratyphoid B, and whooping cough remained within the five-year average.

Chickenpox, German measles, and measles showed nothing unusual.

Tuberculosis, pulmonary and other forms, remained at a consistently low figure.

Mumps and undulant fever were reported at a very low level.

NOTES

Dr. Walter B. Cannon, professor of physiology at the Harvard Medical School and president of the American Association for the Advancement of Science, recently delivered a series of lectures at the University of North Dakota under the sponsorship of the Society of Sigma Xi, the Graduate Club, the University of North Dakota School of Medicine and the district medical society. The titles were: "Maintenance of Stable States in the Body"; "Chemical Mediation of Nerve Impulses" and "Effects of Strong Emotions."

Dr. Aldo Luisada has recently been appointed to a full-time associate professorship in the faculty of Middlesex University School of Medicine. Dr. Luisada received an M.D. degree in 1924 from the University of Florence, then worked in the clinics of Professor Vaquez, of Paris; Professor Loewi, of Graz; and Professor Pick, of Vienna. He then became assistant in the medical clinic of Professor Frugoni in Padua, where he had the direction of an experimental laboratory for physiological and pharmacological research. He served as professor of internal medicine and director of the institute for special pathology at the University of Sassari, and later in the same capacity at the University of Ferrara.

CORRESPONDENCE

CASH INDEMNITY PAYMENTS

To the Editor: The other day in perusing the July 27 issue of the *Journal,* I ran across an editorial which suggested that cash indemnity was now playing a very large part—and apparently a very valuable part—in the solution of the problem of the cost of medical care. You there used an expression which, as I remember it, suggested that this method of payment was now so large as to constitute $300,000,000 annual payments to patients. The sum struck me as very large since it is something like 30 per cent of all the payments made to physicians at about 1928.

I think the context was misleading since I find that in the statement made by the Bureau of Medical Economics in their pamphlet to which you refer, it is quite obvious that this sum represents a great variety of payments, many—and possibly most—of which are not made as cash indemnity for medical service as one ordinarily thinks of it. Clearly, they have included here all the medical benefits paid under life insurance. It looks to me as if they had included payments made under workmen's compensation acts and, from the loose way in which their sentence is worded, I think it probably includes a great many things which do not directly bear upon the problem which you were in fact discussing. I come to this conclusion partly because of a compilation made by Professor Millis of the University of Chicago, which tended to suggest that group and individual health insurance issued by the regular insurance companies was not increasing, was diminishing, and did not cut a very large figure.

It seems to me important to try to keep separate the payments which have long been made by the insurance companies for accidents and which really do not help out very much in providing medical care which can by any stretch of the imagination be called "good." As a matter of fact, most of the accident policies are carried by people who are in relatively good circumstances, or by corporations protecting themselves under the workmen's compensation acts.

HUGH CABOT, M.D.

Soldiers Field,
Boston.

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The sentence in *Organized Payments for Medical Services* (Chicago: American Medical Association, 1939) to which the editorial and Dr. Cabot's letter refer reads as follows:

> An estimate of the amount of cash benefits paid to members of medical service plans, including all types of plans—group and individual accident and health insurance, disability benefits under life insurance, mutual benefit, fraternal and trade union plans, and other cash indemnity medical service plans—would be approximately $300,000,000 annually.

ED.

CARROT ADDICTION

To the Editor: There are many kinds of addictions but this is the first time I have found one for carrots.

REPORT OF CASE

H. W., a forty-two-year-old man, came for examination in August, 1932, because of a canary-yellow pigmentation of the skin of the entire body; there was no tingeing of the sclerae. Bile pigments were absent in the blood and urine, and serum carotin was present. According to the history he had been told by a physician four years before that carrots would be beneficial. Since that time, he had eaten four bunches daily as secured in the market. On being informed as to the cause of his trouble, he left stating he could not stop eating carrots. Attempts to locate him to learn of the eventual outcome have been unsuccessful.

HENRY G. HADLEY, M.D.,

1252 Sixth Street, S. W.,
Washington, D. C.

NOTICES

ANNOUNCEMENT

CHARLES DJERF, M.D., announces the opening of an office at 1159 Hancock Street, Quincy.

PETER BENT BRIGHAM HOSPITAL

A joint medical and surgical clinic at the Peter Bent Brigham Hospital will be held on Wednesday, November 8, from 2 to 4 p.m. Drs. Elliott C. Cutler and Soma Weiss will speak on "Malnutrition." A clinicopathological conference, conducted by Dr. Elliott C. Cutler, will take place from 4 to 5 p.m.

On Thursday, November 9, from 8:30 to 9:30 a.m. there will be at the Children's Hospital, a combined clinic, conducted by Dr. William E. Ladd, of the medical, surgical, orthopedic and pediatric services of the Children's Hospital and the Peter Bent Brigham Hospital.

Physicians and students are cordially invited to attend.

ELLIOTT C. CUTLER, M.D., *Secretary.*

BOSTON CITY HOSPITAL

The monthly clinicopathological conference will be held at the Boston City Hospital on Wednesday, November 8, at 12 o'clock noon, in the Pathological Amphitheater.

JOSEPH E. HALLISEY, M.D., *Secretary,*
Medical Staff.

BOSTON CITY HOSPITAL

A meeting to commemorate the completion of twenty-five years of the Social Service Department of the Boston City Hospital will be held in the Cheever Amphitheater on Wednesday, November 8, at 8:30 p.m.

His Honor Mayor Maurice J. Tobin, Mr. Carl Dreyfus and Dr. Canby Robinson, of Baltimore, will be the speakers.

Tickets for admission may be obtained from the Social Service Department, Boston City Hospital. Doctors, social service workers and others interested are cordially invited to attend.

TUMOR CLINIC, BOSTON DISPENSARY

Each Tuesday and Friday morning, 10:00 to 12:30, there is a meeting of the Tumor Clinic of the Boston Dispensary, a unit of the New England Medical Center. Neoplasms of various sorts are seen and discussed, and when there is an indication, are treated with radium of high-voltage x-ray. Physicians are invited to visit this clinic. They may bring patients for aid in diagnosis or may refer patients to the clinic following which a report will be returned to the referring physician. A limited number of beds are available for diagnostic study and for treatment.

PETER BENT BRIGHAM HOSPITAL

A Research Conference of the Medical Staff of the Peter Bent Brigham Hospital will be held in the amphitheater of the hospital on Tuesday, November 7, at 5:00 p.m. Tea will be served at 4:30 p.m.

PROGRAM

Treatment of Hemolytic Streptococcus Septicemia. Dr. Charles A. Janeway.

Normal Excretion of Androgens and Estrogens in Children. Drs. Joseph C. Aub, Ira T. Nathanson and Lois Towne.

All interested persons are cordially invited to attend.

BOSTON DOCTORS' SYMPHONY ORCHESTRA

The Boston Doctors' Symphony Orchestra will rehearse under Alexander Theide, former concertmaster with the Cleveland Symphony Orchestra and the Philadelphia Symphony Orchestra, every Thursday at 8:30 p.m., in Studio A, Station WMEX, 70 Brookline Avenue, Boston. Those interested in becoming members should communicate with Dr. Julius Loman, Pelham Hall Hotel, Brookline (BEA 2430).

JOSEPH H. PRATT DIAGNOSTIC HOSPITAL

Bennet Street, Boston
Lecture Hall, 9 – 10 a.m.

MEDICAL CONFERENCE PROGRAM

Friday, November 3 — Electro-encephalography. Dr. William G. Lennox.

Saturday, November 4 — Hospital Case Presentation. Dr. S. J. Thannhauser.

Tuesday, November 7 — Is There an American Method of Treating Fractures? Dr. Charles L. Scudder.

Wednesday, November 8 — Hospital Case Presentation. Dr. S. J. Thannhauser.

Thursday, November 9 — Pediatric Case Discussion. Dr. Francis G. McDonald.

Friday, November 10 — Medical Eponymology. Dr. Robert W. Buck.

Tuesday, November 14 — Cardiovascular Disorders in the Course of Some Acute Infectious Diseases. Dr. Conrad Wesselhoeft.

Wednesday, November 15 — Hospital Case Presentation. Dr. S. J. Thannhauser.

Thursday, November 16 — Recent Advances in Hematology. Dr. H. G. Brugsch.

Friday, November 17 — Peripheral Vasospasm in the Causalgia-Like States. Dr. John Homans.

Saturday, November 18 — Hospital Case Presentation. Dr. S. J. Thannhauser.

Tuesday, November 21 — Personality of the Criminal. Dr. A. Warren Stearns.

Wednesday, November 22 — Hospital Case Presentation. Dr. S. J. Thannhauser.

Thursday, November 23 — Diabetic Clinic. Dr. Joseph Rosenthal.

Friday, November 24 — Clinicopathological Conference. Dr. Soma Weiss and Dr. Rudolf Osgood.

Saturday, November 25 — Hospital Case Presentation. Dr. S. J. Thannhauser.

Tuesday, November 28 — X-ray Demonstration. Dr. Alice Ettinger.

Wednesday, November 29 — Hospital Case Presentation. Dr. S. J. Thannhauser.

TUFTS COLLEGE MEDICAL SCHOOL

The Tufts Chapter of the Phi Delta Epsilon fraternity has established an annual lectureship for the student body of Tufts College Medical School.

The first lecture will be held at the Tufts College Medical School on Tuesday, November 7, at 4:00 p. m. Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*, will speak on "Medicine in the Changing Social Status."

Members of the medical profession and their friends are cordially invited to attend.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY

A meeting of the Middlesex South District Medical Society will be held at the Cambridge Hospital, Mt. Auburn Street, Cambridge, on Wednesday, November 8, at 11:30 a.m.

PROGRAM

Business meeting.

The Physical and Chemical Properties of Filterable Viruses. Dr. J. Howard Mueller.

Luncheon will be served at 1:00 p.m. Members in good standing are invited to the luncheon. Guest tickets may be obtained from the treasurer, Dr. Edward Mellus.

DWIGHT O'HARA, M.D., *President,*
ALEXANDER A. LEVI, M.D., *Secretary.*

MASSACHUSETTS TUBERCULOSIS LEAGUE

A mid-year meeting of the Massachusetts Tuberculosis League will be held on Monday, November 13, at the Y. W. C. A., Boston. Dr. Frederick T. Lord will preside.

PROGRAM

Status of the National Campaign. Dr. Henry D. Chadwick, president, National Tuberculosis Association.

The Proposed National Tuberculosis Program and the Commonwealth of Massachusetts. Dr. Alton S. Pope.

The Problem of the Uncompliant Tuberculosis Patient. Dr. Esmond R. Long, director of Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis, and ex-president, National Tuberculosis Association.

A meeting of the Board of Directors will be held at the end of the program.

Luncheon will be served at 12:30 p.m. The addresses will follow. All those wishing to attend should send reservations to the Massachusetts Tuberculosis League, 1148 Little Building, Boston. The cost of the luncheon will be $1.00. Non-members are welcome.

NEW ENGLAND SOCIETY OF PHYSICAL MEDICINE

A Clinical Conference of the New England Society of Physical Medicine will be held on November 8, 9 and 10. The meetings on the first two days will be held at the Hotel Kenmore, Boston, and on the last day at the Mas-

sachusetts Institute of Technology, Cambridge.

The program is as follows:

WEDNESDAY, NOVEMBER 8

HOTEL KENMORE, BOSTON

9:30 President's Address.

10:00 Nitrogen Therapy: The physiological aspects in schizophrenia. H. E. Himwich, M.D., Albany, New York.

10:45 Gastroscopy. Charles W. McClure, M.D., and I. R. Jankelson, M.D., Boston.

11:15 Galvanism and Sinusoidal Currents

1. An Evaluation. William D. McFee, M.D., Boston.
2. Application in Neurology. Samuel H. Epstein, M.D., Boston.
3. Technic in Electrolysis. Wilmot L. Marden, M.D., Lynn.

12:00 Luncheon. Round-table discussion on "Physical Medicine: Its status in medical education." Leader, Curtis T. Prout, M.D.

2:00 to 3:00 Observations on Human Refrigeration (with colored cinema). Temple S. Fay, M.D., Philadelphia.

3:00 to 3:15 Discussion by Joseph C. Aub, M.D., Boston.

3:15 to 3:30 General discussion.

3:30 to 5:00 High Frequency Currents.

1. Surgical.
   - General Surgery. Ernest M. Daland, M.D., Boston.
   - Gynecology. Benedict F. Boland, M.D., Boston.
   - Urology. Prodromos Papas, M.D., Boston.
2. Medical.
   - Clinical Evaluation. Joseph H. Pratt, M.D., Boston.
   - Clinical Demonstration of Short Wave Technic. Heinrich G. Brugsch, M.D., Boston.

6:30 Informal Banquet.

Seeing the Unseen with Stroboscopic Photography. Harold E. Edgerton, Ph.D., Cambridge.

Modern Physics and the Modern Physician. George R. Harrison, Ph.D., Cambridge.

THURSDAY, NOVEMBER 9

HOTEL KENMORE, BOSTON

9:30 The Pigments and Color of Living Human Skin. Edward A. Edwards, M.D., Boston, and Seibert Q. Duntley, Sc.D., Cambridge.

10:15 Hydriatic Sedatives (with cinema demonstration). Rebekah Wright, M.D., Boston.

10:45 Radiation.

1. The Physics of Radiation Therapy. Robert S. Harris, Ph.D., Cambridge.
2. Radiation Therapy in Dermatology. Francis P. McCarthy, M.D., Boston.
3. Radiation Therapy in Tuberculous Conditions. Walter A. Griffin, M.D., Sharon, Massachusetts.

12:00 Luncheon.

2:00 Fever Therapy. Curtis T. Prout, M.D., Arlington, Massachusetts, and John G. Gibson, M.D., Boston.

3:00 Massage and Corrective Exercise.

1. Posture. Sumner M. Roberts, M.D., Boston.
2. Massage Demonstration. Miss Cole, technician.

5:00 Business meeting and dinner of the Academy of Physical Medicine.

FRIDAY, NOVEMBER 10

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE

9:30 Biophysics Research Laboratory (Room 3-406). Joseph W. Horton, Sc.D.

10:00 Color Research Laboratory (Room 8-203). Arthur C. Hardy, Sc.D.

10:30 Radioactivity Research Laboratory (Room 6-407). Robley D. Evans, Ph.D.

11:00 Cyclotron Research Laboratory (Building 44). Robley D. Evans, Ph.D.

11:30 One Thousand Kilowatt Electrostatic Generator (Building 20). John G. Trump, Sc.D.

Physicians, research workers, students, technicians and nurses are cordially invited to attend all sessions of the conference. There will be no registration fee.

HENRY A. TADGELL, M.D., *President,*
WILLIAM D. MCFEE, M.D., *Secretary.*

AMERICAN BOARD OF OPHTHALMOLOGY

A written examination of the American Board of Ophthalmology will be held on March 2, 1940, in various cities throughout the country. This will be the only written examination in 1940, and all applications must be received before January 1, 1940. All applicants must pass satisfactory written examination before being admitted to oral examination.

The first oral examination will be held in New York City on June 8 and 10. Candidates planning to take this examination must file case reports before March 1.

For application blanks, write to Dr. John Green, 6830 Waterman Avenue, St. Louis, Missouri.

UNITED STATES CIVIL SERVICE EXAMINATIONS

Senior Medical Officer, $4600 a Year
Medical Officer, $3800 a Year
Associate Medical Officer, $3200 a Year

Applications must be on file with the United States Civil Service Commission at Washington, District of Columbia, not later than November 13.

Applicants for senior medical officer must qualify in at least one of the following optional branches: aviation medicine, cardiology, cancer research.

Applicants for medical officer and associate medical officer must qualify in at least one of the following optional branches: aviation medicine; cardiology; dermatology; eye, ear, nose and throat (singly or combined); general practice; industrial medicine; internal medicine and diagnosis; medical pharmacology; neuropsychiatry; pathology, bacteriology and roentgenology (singly or combined); public health; surgery; tuberculosis and urology.

Applicants must have been graduated from a medical

school of recognized (Class A) standing with the degree of M.D. subsequent to May, 1919, for medical officer; subsequent to May, 1932, for associate medical officer. Applicants for the position of senior medical officer are not required to have been graduated within any specified time limit.

Further information and the necessary forms may be obtained from the Secretary, Board of United States Civil Service Examiners, at any first-class post office, from the United States Civil Service Commission, Washington, D. C., or from the United States Civil Service district office.

SOCIETY MEETINGS AND CONFERENCES

Calendar of Boston District for the Week Beginning Monday, November 6

Monday, November 6

*12:15 p.m.–1:15 p.m. Clinicopathological conference. Dr. S. Burt Wolbach, Peter Bent Brigham Hospital amphitheater.

*4 p.m. Physicians and medical students are cordially invited to attend a clinic presented by the medical, surgical and orthopedic services of the Infants' and Children's hospitals in the amphitheater of the Children's Hospital.

Tuesday, November 7

*9–10 a.m. "Is There an American Method of Treating Fractures?" Dr. Charles L. Scudder. Joseph H. Pratt Diagnostic Hospital.

*10 a.m.–12:30 p.m. Boston Dispensary tumor clinic.

*12:15 p.m.–1:15 p.m. X-ray conference. Dr. Merrill C. Sosman. Peter Bent Brigham Hospital amphitheater.

*4 p.m. Phi Delta Epsilon Fraternity Lectureship. Tufts College Medical School.

*5 p.m. Peter Bent Brigham Hospital. Research conference of the Medical Staff. Amphitheater.

8:15 p.m. Greater Boston Medical Society. Beth Israel Hospital auditorium.

Wednesday, November 8

New England Society of Physical Medicine. Hotel Kenmore, Boston.

*9–10 a.m. Hospital case presentation. Dr. S. J. Thannhauser. Joseph H. Pratt Diagnostic Hospital.

*12 m. Clinicopathological conference. Children's Hospital Amphitheater.

12 m. Boston Gastroenterological Society. Boston City Hospital. Dowling amphitheater.

12 m. Boston City Hospital. Monthly clinicopathological conference. Pathological amphitheater.

*2 p.m.–4 p.m. Joint medical and surgical clinic. Peter Bent Brigham Hospital.

8:30 p.m. Boston City Hospital. Meeting to commemorate the completion of twenty-five years of the Social Service Department. Cheever amphitheater.

Thursday, November 9

New England Society of Physical Medicine. Hotel Kenmore, Boston.

*8:30 a.m. Combined clinic of the medical, surgical, orthopedic and pediatric services of the Children's Hospital and the Peter Bent Brigham Hospital, at the Children's Hospital.

*9–10 a.m. Pediatric case discussion. Dr. Francis C. McDonald. Joseph H. Pratt Diagnostic Hospital.

Friday, November 10

New England Society of Physical Medicine. Massachusetts Institute of Technology, Cambridge.

*9–10 a.m. "Medical Eponymology." Dr. Robert W. Buck. Joseph H Pratt Diagnostic Hospital.

*10 a.m.–12:30 p.m. Boston Dispensary tumor clinic.

Saturday, November 11

*10 a.m.–12 m. Medical staff rounds of the Peter Bent Brigham Hospital. Conducted by Dr. Soma Weiss.

*Open to the medical profession.

November 3 — William Harvey Society. Page 676, issue of October 26.

November 3–4 — American Sanatorium Association. Page 676, issue of October 26.

November 3–29 — Joseph H. Pratt Diagnostic Hospital. Medical Conference Program. Page 718.

November 6–8 — American Academy of Dermatology. Page 676, issue of October 26.

November 6–11 — New England Medical Center. Teaching Clinics on Cancer. Page 633, issue of October 19.

November 7 — Greater Boston Medical Society. Page 676, issue of October 26.

November 7 — Phi Delta Epsilon Fraternity Lectureship. Tufts College Medical School. Page 718.

November 7 — Peter Bent Brigham Hospital. Research conference of the Medical Staff. Page 718.

November 8 — Boston City Hospital. Monthly clinicopathological conference. Page 717.

November 8 — Peter Bent Brigham Hospital. Joint medical and surgical clinic. Page 717.

November 8 — Boston City Hospital. Meeting to commemorate the completion of twenty-five years of the Social Service Department. Page 717.

November 8, 9, 10 — New England Society of Physical Medicine. Page 718.

November 8 — Boston Gastroenterological Society. Page 675, issue of October 26.

November 9 — Combined clinic of the medical, surgical, orthopedic and pediatric services of the Children's Hospital and the Peter Bent Brigham Hospital. Page 717.

November 9 — Pentucket Association of Physicians. 8:30 p.m., Hotel Bartlett, Haverhill.

November 13 — Massachusetts Tuberculosis League. Page 718.

December 2 — American Board of Obstetrics and Gynecology. Page 1019, issue of June 15.

December 8 — William Harvey Society. Page 676, issue of October 26.

January 6, June 8–11, 1940 — American Board of Obstetrics and Gynecology. Page 160, issue of July 27.

January 22–25, 1940 — American Academy of Orthopaedic Surgeons. Hotel Statler, Boston.

March 2, June 8 and 10 — American Board of Ophthalmology. Page 719.

March 7–9, 1940 — The New England Hospital Association. Hotel Statler, Boston.

May 14, 1940 — Pharmacopoeial Convention. Page 894, issue of May 25.

June 7–9, 1940 — American Board of Obstetrics and Gynecology. Page 1019, issue of June 15.

District Medical Societies

ESSEX SOUTH

November 15 — "Heart Disease in Pregnancy." Dr. C. Sidney Burwell. Beverly Hospital, Beverly.

December 6 — "Pyelonephritis and Its Relation to Other Inflammatory Diseases of the Kidney." Dr. Soma Weiss. Salem Hospital, Salem.

January 3, 1940 — "Head Injuries." Dr. John S. Hodgson. Danvers State Hospital, Hathorne.

February 14 — "Cough, Sputum, Hemoptysis — How shall they be investigated?" Dr. Reeve H. Betts. Essex Sanatorium, Middleton.

March 6 — "Experimental and Clinical Considerations of Sulfanilamide Treatment of Hemolytic Streptococcal Infections." Dr. Champ Lyons. Lynn Hospital, Lynn.

April 3 — Addison Gilbert Hospital, Gloucester.

May 8 — Annual meeting. Salem Country Club, Peabody.

HAMPSHIRE

November 8.

January 10, 1940.

March 13.

May 8.

All meetings are held at 11:30 a.m. at the Cooley Dickinson Hospital, Northampton.

MIDDLESEX EAST

November 15.

January 10, 1940.

March 20.

May 15.

Meetings are held at 12:15 p.m. at the Unicorn Country Club, Stoneham.

MIDDLESEX SOUTH

November 8 — Page 718.

PLYMOUTH

November 16 — Moore Hospital, Brockton.

January 18, 1940 — Brockton Hospital, Brockton.

March 21 — Goddard Hospital, Brockton.

April 18 — State Farm.

May 16 — Lakeville Sanatorium, Lakeville.

SUFFOLK

November 29 — Scientific meeting. Treatment of Syphilis. Dr. Harold T. Hyman, Dr. Louis Chargin, and Dr. William Leifer, of New York City.

January 31, 1940 — Scientific meeting. Subject to be announced later.

March 27 — Scientific meeting. Symposium on Ulcerative Colitis and Diarrheas. Under the direction of Dr. Chester M. Jones.

April 24 — Annual meeting in conjunction with the Boston Medical Library. Election of officers. Program and speakers to be announced later.